

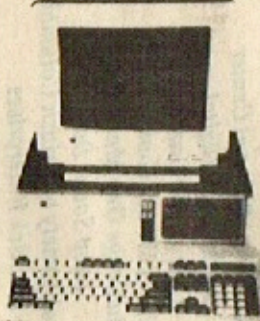
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SOFTWARE . . . MS DOS VER. 3.30 AND QW BASIC  
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# The COMPUTER PAPER

BRITISH COLUMBIA'S COMPUTER INFORMATION SOURCE

Vol 1, No. 11 December 1988

FREE

## CHOOSING A LAPTOP



Comdex Report  
Computer Aided Design  
Computers in Education  
Christmas Buyer's Hot List

# THE KAYPRO 286

Here's the North American-made computer that kicks out all your old assumptions about the cost of truly advanced technology. Consider these facts about the KAYPRO 286. At its top speed of 16-MHz, the KAYPRO 286 is faster, yet less expensive than most standard 386 systems.\* And with the OS/2-compatible KAYPRO 286, adapting to the rapidly changing standards

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- ★ 1 MB RAM
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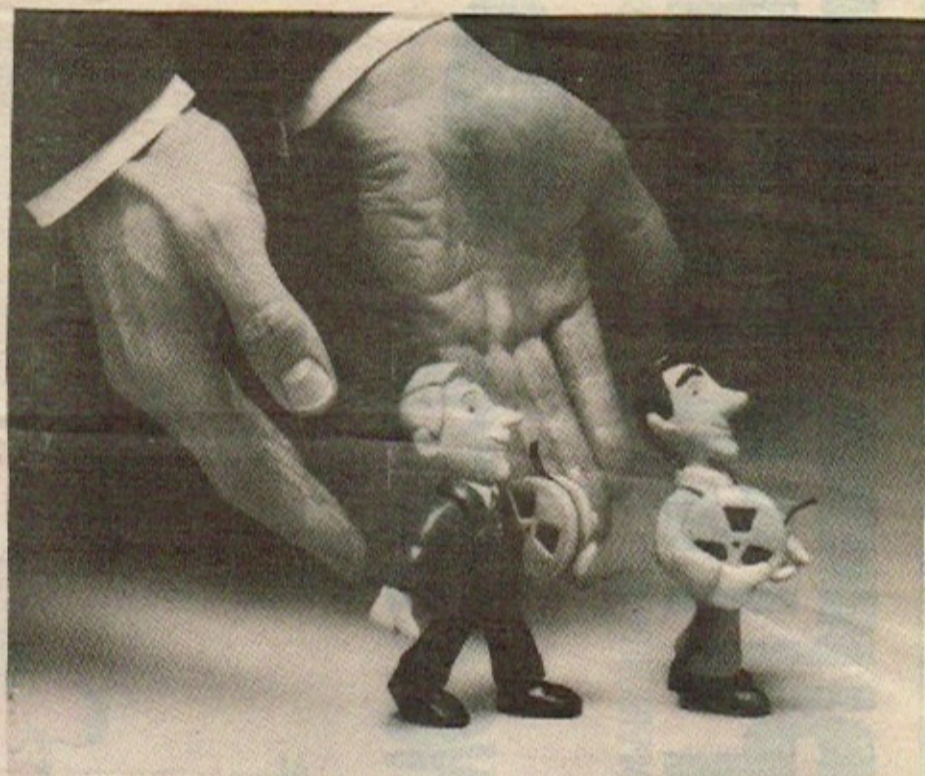
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The

# COMPUTER PAPER

BRITISH COLUMBIA'S COMPUTER INFORMATION SOURCE

Vol 1. No. 11 December 1988

## FROM THE EDITOR



The Computer Paper staff and family wish you the Season's Best. (L to R) Sarab Sangeet Singh, John Oliver, Liz Grant, Sat Siri Singh, Guru Sangat Kaur, Hari Atma Kaur, Kirtan Singh and Ward Stirrat



Another busy month in the computer industry. The whirlwind of Comdex is over just in time to get ready for Christmas. This month we look at laptops. The desire to have easily accessible a powerful computer is driving designers to push ever increasing resources into developing portable technology. New screens, new power sources, larger storage capacity, faster and more powerful chips are evolving the laptop into the computers of the future. Now if the prices would just evolve down, many more could afford this style of computing.

I was in a computer store recently and listened to a sale going on. The customer had gotten a price on the same system from a large discount electronics store. He wanted to know why he should have to pay \$200 more for the same hardware from the smaller retailer. He acknowledged the differences between the style of sale. Virtually no support compared to a more knowledgeable sales staff, the reality of lower volume and higher overhead attached to giving a fuller service. He still wanted a better deal. After some time and considerable calculation the price did come down - but only part way. The customer was reasonable. He wanted to buy from the smaller retailer because he had had two previous computers, and he realized the difference a good dealer can make. He stayed to hear why he should buy. Many don't.

It is always a trade off. No one likes to spend more money, but in the long run a good retailer can easily pay for a minor difference in initial pricing. With things like solid recommendations for software purchases, access to shareware libraries, setting up hard drives or after hours trouble shooting for loose cables or incompatible drivers. So think about it before you buy. What really is the best deal?

In our ongoing effort to live up to our mandate to be B.C.'s Computer Information Source, this month we are welcoming over 2,000 school computer resource people and school librarians throughout the province to our distribution. We have also begun a new section called Computers & Education in which we hope to track some of the activities and events occurring in the field of education. Computers are having a large impact on education, just as they affect almost everything else we do.

Many thanks to those of you who have contacted us on Mindlink, the Bulletin Board System. (533-2312: Type: Computer Paper when asked for your name.) We really appreciate the feedback - it helps us stay in touch with the things you would like to see more of in the paper. The sun is coming up and the printer is calling. Until next issue. Season's Greetings from all of us at The Computer Paper.

*Kirtan Singh Khalsa*

Kirtan Singh Khalsa  
Publisher/Editor

## What's Next in COMPUTER PAPER

**January: Payroll Packages/Monitors**

Copy & Ad Deadline: Friday, Dec 16

**February: Telecommunications/FAX**

Copy & Ad Deadline: Friday, January 20

**March: Desktop Publishing/CD-ROM**

Copy & Ad Deadline: Friday, February 17

**April: Spreadsheets/386 Machines**

Copy & Ad Deadline: Friday, March 17

**May: Point of Sale/Printers**

Copy & Ad Deadline: Wednesday, April 19

**June: DOS/Hard Drives**

Copy & Ad Deadline: Friday, May 19

**July: Memory Upgrades**

Copy & Ad Deadline: Friday, June 16

**Call for Advertising Rates:**  
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We have assembled a collection of Laptops available in the local market to assist you in your buying decisions.

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We include this review in our laptop section because it is such a great companion product to many laptops. Ideal for sales or just to keep you organized with large numbers of contacts.

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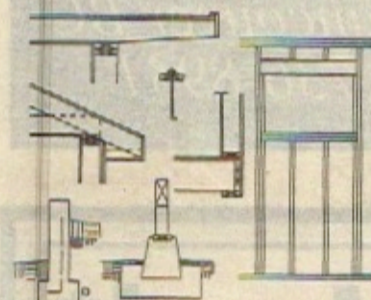
Computers are finally starting to make inroads into this profession. A new program for the Mac is a trend setter in converting professional architects.

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Gord Simmonds keeps us up to date on a CAD program distributed through shareware.

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## LETTERS TO THE EDITOR

Our signing onto Mindlink's BBS (533-2312) has proved to be a very successful method of communication. As another BBS owner Steve Barer of Citilink pointed out, Electronic Mail is so easy to deal with. Some estimates put the cost of replying to a letter at up to \$5.00 when you count stamps, envelopes, stationary, your time to write it, print it, and mail it. With electronic mail, most mail can be sent in 30 seconds or less. No fuss, no muss. And you can communicate with many more people than would ordinarily be possible. At any rate, our presence on Mindlink certainly got us more mail. Here are some of the messages we got.

Dear Computer Paper

Here's your first contribution via Mind Link. The log on message looks fine - I hope it leads to an active participation by the local computing community. Thanks for the article you did last month on Catalyst BBS. The article itself was an example of one of the uses of Catalyst. The story was typed into a file on the Catalyst BBS by the writer in her basement. The editor of the Computer Paper was then able to "download" it at the Computer Paper office, edit it and enter it into the page layout program. Elsewhere in this issue you will see instructions for making your own contributions, placing an ad., or writing a letter to the editor all without leaving your home!

Peter Miller  
Catalyst BBS  
872-6968

Dear Computer Paper

As a computing professional, and being new to this area I would like to find information about Job agencies in this area. It would be helpful to many people if your paper listed some contacts occasionally.

Unsigned

## MASTHEAD

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Type "Computer Paper" instead of your name  
when signing on.



We have been talking to a number of computer professional job agencies about advertising. It is only a matter of time before they take us up on it.

Dear Sir:

I regularly read Computer Paper and usually find it to be informative and accurate. However, I noted some inaccuracies in the news item entitled "Veni, Vidi, Amiga" on page 9 of the November 1988 Computer Paper. First, "...until Commodore produces its first World of Commodore..." implies that there have been no previous World of Commodore shows when, in fact, there have been many here in Canada. The article, then, should state "...until Commodore produces its first World of Commodore in the United States..." Second, "Amiga has sold approximately 600,000 units in just its first year" is just wrong. The Amiga has been available commercially since November, 1985, and will have sold an estimated 1,000,000 units by the end of 1988. Third, "...Commodore is still struggling to recover from earlier financial setbacks..." is the damaging type of inaccuracy that Amiga owners saw in 1985, when Commodore was, indeed, "struggling;" their stock dropped to a low of \$4 1/2 per share on the New York Stock Exchange. As of this year, however, Commodore has posted ten straight quarters of profits and their stock is currently selling at around \$10 1/2 per share.

Joel Murray

You are right on many of these points, I will pass the feedback along to the Newsbytes editor who wrote the story. It is true, Commodore does get maligned occasionally despite having a number of best selling products.

We also got a few letters the old fashioned way... by FAX (732-4280)

Dear Computer Paper,

Thank you again for the most recent edition of The Computer Paper which is read with interest here at Boswell and, of course, your article on "Boswell". However, I would like to clarify that development to commercial viability is further ahead than your final paragraph suggested.

I am sorry that at the time you saw "Boswell" there was only myself to demonstrate it and that all I could at the time access was a limited prototype program. The main architecture is basically ready to be filled with the necessary vocabulary and testing so there is very little "code left to crunch" to achieve a marketable product. That is not, of course, to say that software development stops there - it will be an on-going process.

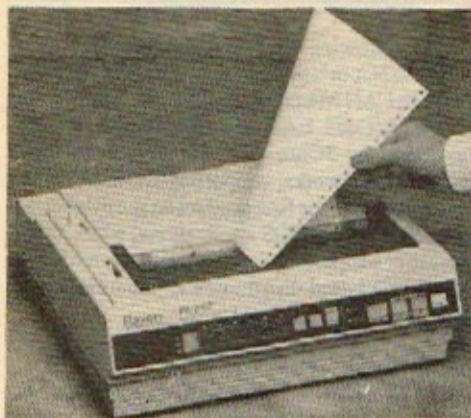
Boswell's hardware has had almost two years of testing and development and the commercial model will be ready for operator training in January.

Boswell Industries Inc. and its parent company Rockspan Industries would also be delighted to have your attendance at the unveiling of that equipment early in the new year and will be extending a formal invitation when the date is set.

We thank you for your interest and your continued service to the industry.

Sincerely,  
Peter Junger  
Director  
Boswell Industries

I look forward to seeing your new equipment and wish you luck in the venture.



### ROLAND Announces New Printer

VANCOUVER, B.C. — Roland DG Canada Inc. has announced a desktop matrix printer with an array of operator conveniences: the Raven PR-2417. In the words of Roland DG General Manager Greg Fleck, "The Raven PR-2417 is the first matrix printer whose paper handling and formatting power equal its 24-pin print head."

Hardware features include extensive sound insulation, a "no-platen" design, and a new 100-million character 24-pin print head. The tractor can be set from pusher type to puller type in one quick adjustment. Paper handling can be done front feed, bottom feed and back feed.

On the control panel, features include: *Memo Load*, for quick printing of single sheets without removing continuous form paper from the tractor feed; *Perf Cut*, to advance continuous form paper for easy tear-off, then retract it to top-of-form; *Micro Line Feed*, for paper advance in tiny increments to position the print head for pre-printed forms; and three *Macro* settings for instant recall of printer setup.

The Raven PR-2417 boasts five built-in letter quality fonts: *Courier*, *Bold PS*, *Script*, *Sans Serif*, and *Pretype*. In addition, *Draft* is available for quick printing. The suggested retail price of \$744.95 includes a two-year parts and service warranty.

### QMS Offers PostScript Controller for LaserJet & Compatibles

QMS Computer Products Ltd. announces the immediate availability of Imagen Corporation's PC Publisher controller card for MS/PC DOS based Desktop publishing applications.

PC Publisher is a full size board with a Motorola 68000 and 2 MB RAM that will give any Canon CX based and HP Series II/Canon LBP-8II full PostScript compatibility. With the addition of PC Publisher, users will be able to fully scale and rotate available fonts and produce high quality, full page 300 dpi graphics in approximately 1/3 the time.

The PC Publisher Kit comes complete with UltraScript (Imagen Corp's. PostScript Compatible language) and Epson, Diablo, Qume, Nec, IBM Graphics and HP Laser Jet. Also included is Imagen's DDL Document Description Language as an alternative to UltraScript, the 35 standard PostScript typefaces, and DDL LaserPlotter (HP7470A, HP7475A, HP Colorpro emulations).

A second introduction is that of the PC Publisher System. This product combines the PC Publisher with a generic Canon SX laser printer. This will give the user a Desktop Publishing solution when combined with MS/PC DOS software. Priced at \$6995, it should be extremely competitive with lower cost PostScript devices. PC Publisher Kit (Canon CX lasers) \$2995, PC Publisher System \$6995 (Toronto).

### Datex Offers Service For Manuals

Datex Services may have a solution to the information overload that many large organizations are facing when confronted by the need for manuals. They offer a complete service involving information gathering, organization, and preparation according to efficient methods and standards. Production is via a powerful system which produces personalized copies with a variety of features. The service involves planning, formatting, text entry, production, graphics, binders, tabs, assembly, distribution, etc.; all the details that challenge most in-house attempts are presented at a fixed price.

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### Epsi Produces Their First Hypercard Product

A while back in these pages we mentioned a company called Epsi in the context of an article on Hypercard development. Well, that company has released its first Hypercard product: The Epsi Accident Recording system which provides companies that need to track industrial accidents with quick data entry and an easily understood display, making learning and use fast and cost effective.

President, Robert Epsi distinguishes his product from the abundance of "Stackware" available through public domain channels by calling it "Hypersoft". The program is targeted at large corporations with the need to track on the job accidents.

The Accident Recording System, presents the user with an 'Accident Information' form. The user tabs through fields, entering the data as required. Black arrows next to each date field allows for easy setting of the accident date and time. On this screen the Checklist button takes the user to the 'Accident Checklist' shown in the upper right corner of this page. Here the user describes the accident by 'mouse-clicking' on the appropriate check-box. Maneuvering through other records is accomplished by clicking once on either the left or right arrows at the bottom of the form, taking the user to either the previous or next record in the database. The Cross button, shown at the bottom of the 'Accident Checklist' screen, takes the user back to the 'Accident Information' screen. The Magnifying Glass button allows the operator to record specific accident conditions such as the description, cause, corrective actions and recommendations to eliminate future accidents of this type occurring again. The running figures at the bottom of the forms enable the user to find specific persons or accidents recorded in the database. The printer button allows you to print nine standard reports, and gives you the ability to customize reports quickly and painlessly.

Standard reports included: Analysis by Date, Analysis by Department, Analysis by Employee number, Analysis by Name, Analysis by Occupation, Analysis by Time, Time Lost, Master Index, Summary.

Along with the standard reports, data can be easily transferred to other applications, such as Microsoft Excel™, for custom charts and data analysis. Call Epsi at 943-4194 for an in-house demonstration of this new product. The Epsi Accident Recording System is priced at \$3700.

### Bedford Workbook Helps Small Businesses With Accounting

Bedford Integrated Accounting is a must for the thousands of entrepreneurs and small businesses in Canada who need a quick and practical guide to using one of the country's bestselling software products. Now a new workbook is available to guide the many users through the effective use of this program. It is called *Learning Bedford Integrated Accounting: Applications Workbook* by Purbhoo and Borel.

Eleven businesses—ranging from Tivoli Theatre to Pleasant Valley Park—provide applications for all of Bedford's accounting system: general ledger, accounts payable, accounts receivable, payroll, inventory and jobcosts. Complete keystrokes are provided and readers can proceed directly with transactions already developed and stored on the accompanying disk.

Exercises are presented in order of complexity both from the computer and accounting points of view. Applications are all focused on making Bedford Accounting as accessible as possible: spreadsheets, data bases, and word processing applications are illustrated; input forms are designed to match user's entry of transaction information; and lists of data files and their abbreviations facilitate movement throughout the applications.

Requirements are an IBM PC or compatible, with 5.25" disk drive and Bedford Integrated Accounting Package.

D. Purbhoo is a teacher of accounting and data processing at Eastern High School of Commerce. L. Borel is the Director of Business at Lester B. Pearson Collegiate Institute.

### Shareware For Squamish Area

If you live in Squamish, and you are looking for a bargain in software, you are in luck. Sim-Com Services has recently announced the opening of Sim-Com Services (Squamish). The new Squamish office will handle the full line of SHAREWARE products offered at their Surrey location, and Sim-Com memberships will be honoured at the new location.

Sim-Com Services has been encouraging the SHAREWARE concept and is seeking Canadian writers to add their works to the shareware library. Contact: Bob Clapp at 2021 Maple St. or write to P.O. Box 5251, Squamish, B.C., V0N 3G0. 892-5551. Surrey 585-2326

### Taito, Japanese Games Masters Release First PC Game

Taito Software Inc., the Japanese games giant headquartered in North Vancouver has recently announced its first title for the IBM PC. The North American subsidiary of \$500 million Japan-based Taito Corp., today announced the immediate availability of *Arkanoid*. Until now Taito Software has offered its popular arcade games solely for use with Nintendo Entertainment Systems and Commodore computers. The release of *Arkanoid* marks Taito's entry into the broader IBM-PC-compatible games software market and the first of a series of arcade hits Taito plans to bring to the PC format. *Arkanoid* was repeatedly selected by RePlay magazine as one of the top six most popular games.

### Friendly Technology Branches Out

Friendly Technology has created a new division called Ribbons Etcetera, to focus on what it perceives to be a growing demand for computer and business supplies. The company offers free priority delivery on downtown orders over \$25 as well as delivery within 12 business hours. Contact: Bryce Winter, 682-6488

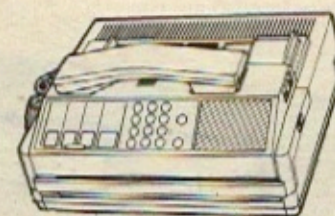


### New Mac Hard Drives Flying From Richmond

The guys at ADAM Peripherals are at it again with the release of the MACFLY PLUS series of external hard drives, available in capacities of 20 mb to 300 mb. The MACFLY Plus is a snazzier looking set of drives than their previous offering. They feature a built-in power control centre with surge, noise and spike protection. Four illuminated rocker switches mounted on the front of the hard drive case correspond to four surge and noise suppressed outlets on the back. The drives use MiniScribe and Control Data drive mechanisms, both known for reliability. The MacFly series is available at a number of local Apple dealers.

Adam also announced the release of TRANSIT, a 45 mb removable cartridge hard drive system for Apple Macintosh computers. The Transit can be used either as a primary or backup storage device. As a primary device, the Mac can "boot" directly from the Transit and operate as a high-speed hard disk. As a backup device, the Transit is as easy to use as a floppy disk, only many times faster and 55 times larger. ADAM Peripherals commenced shipping the unit in the first week of November. Suggested list price for the Transit is \$2295.00 (Canadian) with each additional 45 mb cartridge available for \$275.

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### Frantek Opens Larger Facility

(Vancouver, Nov. 3, 1988) — More than 60 local dealers and product vendors joined the staff of Frantek Computer Products Inc. in celebrating the opening of the distributor's new 7,000 square-foot West Coast facility.

The new Frantek branch, located in Richmond near Vancouver's international airport, includes 5,000 sq. ft. of warehouse space, a sales office and the first of four dealer training centres Frantek will open across Canada through the next six months. A unique feature of the facility is the dealer training centre which will allow Frantek and product vendors to provide in-depth technical and sales training to resellers and their staff. Frantek, which

was acquired by Micro D Inc. last March, distributes more than 4,000 microcomputer software and hardware products to resellers across Canada. Contact: D. Peter Vanderlee, Frantek Computer Products Inc., 1-800-267-9700.

### Financial Statement Analysis Program For Professionals

Mr. Herbert A. Hoyles, President, Hoyles Associates Inc., A/E Software Group, Vancouver, recently announced the release and shipping of A/E Financial Planner, a powerful data base financial statement analysis program designed for architects. **New Business Information**

### Database Available at SFU

Information is one of the most valuable commodities in the business world — but at times, the right information can be hard to find. The Simon Fraser University Enterprise Centre offers a solution to that problem with a computerized information service for businesses.

"We access an information database provided by the Federal Business Development Bank," says Dr. Bill Wedley, a member of the business administration faculty and director of the Enterprise Centre.

The database includes information on federal, provincial and municipal government assistance programs for business; key business regulations; services available from Canadian trade associations; information concerning Canadian trade representatives abroad and foreign trade representatives in Canada; government-funded inventions available for commercialization; new U.S. products with Canadian market potential; and census data on population, income and employment. It is updated by weekly and available at a nominal cost. Contact: Simon Fraser Enterprise Centre at 291-4412.

### 3COM Increases Local Support

In an effort to quell the tide of Novell network installations in the Vancouver area and provide a alternative networking system, 3Com Corporation of Santa Clara, California has recently opened a Vancouver office at Suite 1500 - 701 West Georgia Street in the IBM Tower. 3Com is a network systems company which is known for its fast hardware products.

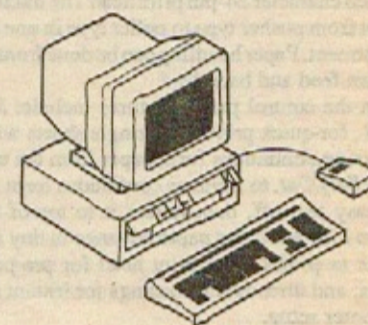
Michael Tiernay, account executive for 3Com in Vancouver stated that "3Com has realized for some time the need for local representation to help support and market its extensive network product line." With the Bridge merge, 3Com now has a wide variety of wide area network product including SNA, TI, Fiber Optic, TCP/IP and UNIX

products allowing one stop shopping for networks.

Key to 3Com's product strategy is the release of 3+ Open LAN Manager. 3+ Open incorporates the Microsoft OS/2 LAN Manager, which was co-developed by 3Com and Microsoft. It provides multi-area networks, supporting DOS, OS/2 and Macintosh. It is the first product on the market that supports existing DOS applications, while simultaneously supporting the new generation of powerful, OS/2 based distribution applications.

### New Training Oriented Centre for Surrey

P.I.C.S. COMPUTER SERVICES hopes to help solve the shortage for computer training in Surrey. Their new offices located at Suite 117H-14914 - 104th Avenue offer computer training and tutoring on most popular business software packages. P.I.C.S. also does computerized accounting, custom programming, word processing, and desk-top publishing. Classes are available both on site and at P.I.C.S.'s offices. Contact: 589-2215 ext. 17.



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### Question of the Month

**From:** Ian Frazer of Softrak Systems Inc.

**Q:** "Where did you get those numbers showing 3Com performance up to **448% faster** than Novell's Netware 2.11?"

**A:** Dear Softrak,

The comparison of 3Com and Novell performance comes from Neal Nelson's Business Benchmarks, which indicate that applications run up to **448% faster** (the copy function runs up to **452% faster**), on 3Com over Novell on identical hardware. Statistics that cannot be ignored (call us for a copy).

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## ATARI

### Atari Confirms ST Plus

SLOUGH, BERKSHIRE (NB) — Atari UK has confirmed the existence of the ST Plus, as reported in last week's NEWSBYTES UK. In addition, the company has revealed that a sub-£100 ST console (an ST minus keyboard) will be shipped in the UK early next year.

According to the latest COMPUTER TRADE WEEKLY newspaper, the ST Plus, as the Super-ST has been officially named, will be shipped in limited quantities to UK developers towards the end of this month. NEWSBYTES UK's US sources have also confirmed that the ST Plus is based around the Motorola 68020 microprocessor and not the 68030 chip, as was previously thought.

On the ST console front meanwhile, Bob Gleadow, Atari UK's managing director, is quoted as preferring not to say too much on the console's specifications, for fear of upsetting a pre-Christmas campaign in the UK aiming to push the old VCS and XE games console systems.

### Atari 68030 Machine Soon

SLOUGH, BERKSHIRE (NB) — With Comdex Fall, due to be held in Las Vegas later this month, close at hand, first details of Atari's 88/89 plans for a 68030-based series of machines are beginning to emerge. According to NEWSBYTES UK's sources, a 68030-based workstation will be unveiled at Comdex.

The machine will run under a Unix environment, and support the Ethernet networking protocol. It will not, however, reportedly run TOS (Tramiel Operating System) programs, making it incompatible with the existing 68000-based Atari ST series.

Pricing and availability of the new machine have not been revealed to NEWSBYTES UK, but it is said to be pitched firmly at the Unix workstation market, which the Atari ST series has breached at the lower end.

## BC BYTES

### Bedford Offers Tech Support

BURNABY, BRITISH COLUMBIA 1988 NOV 14 (NB) — Beginning December 1, Bedford Software Inc. will offer 30 days free technical support to buyers of its accounting software packages. The free telephone support will start when a new customer mails in the "Comfort Card" registration included in each package.

Bedford also announced an expansion of its long-term support package. For an \$89 annual fee, customers will receive a new disk whenever their accounting software is updated. Bedford publishes Integrated Accounting for IBM and compatible PCs, and Simply Accounting for the Macintosh.

### Link From ACCPAC To 1-2-3

VANCOUVER, BRITISH COLUMBIA, 1988 NOV 16 (NB) — Synex Systems Corp. has unveiled software that will allow Lotus Development Corp.'s 1-2-3 spreadsheet to produce financial reports from accounting system data. AccoLink will bring data from Computer Associates Inc.'s Accpac Plus and EasyBusiness accounting systems into 1-2-3. There the data can be made into assorted reports, including graphics. David Richards, AccLink product manager, said the software will be available in February at a price comparable to that of a single Accpac module. He added that the company plans to produce versions that work with other accounting packages.

Synex has developed an assortment of personal computer software, most of which is marketed by other companies. Its best known creations are SQZ! Plus and The Cambridge Spreadsheet Analyst, both sold by Symantec Corp.

### Bedford Cofounder Takes Helm At Pinetree Software

VANCOUVER, BRITISH COLUMBIA 1988 NOV 4 (NB) — Tom O'Flaherty, a cofounder of Bedford Software, has resigned as vice-president of marketing at the accounting software vendor. He will become president of Pinetree Software Inc. in Richmond, B.C., a Vancouver suburb. Pinetree launched its first product, a productivity package for MS-DOS called The Maximizer, in

June. O'Flaherty's job will be to market The Maximizer in Canada, the United States and other world markets.

Pinetree founder and former president Don Pelling will remain a director of Pinetree Software Inc. and chief executive of its parent company, Pinetree Software Canada Ltd. At Bedford, O'Flaherty is replaced by Alex Morton, a veteran of Borland International Inc. in Scotts Valley, Calif., as reported earlier in NEWSBYTES.

### Exchange Struggles With Automated Trading Problems

Vancouver, British Columbia 1988 Nov 4 (NB) — The Vancouver Stock Exchange had trouble with its six-month-old automated trading system this week, forcing the exchange at one point to move some active stocks back to manual trading methods. Warren Funt, manager of trading development, said some of the exchange's computer terminals started displaying garbage data Tuesday morning. For a short time that day, the exchange moved the most actively traded of the 500 stocks on the automated trading system back to manual trading. Since then, Funt said, the exchange has been monitoring the situation. Terminals were misbehaving throughout the week, but problems weren't severe enough to prevent use of the system, he said.

Funt said the cause of the problem was not certain, but had to do with the broadcast of information to remote terminals. He said record trading volumes on the automated system probably contributed to the problem.

Computer Associates Canada Ltd., Vancouver, British Columbia, said it will ship Version 5.1 of its ACCPAC Plus System Manager/2 announcing software for OS/2 in the first quarter of 1989. The software will ship with LanPak Version 5.1. The new version will run in OS/2 protected mode on a 3Com Corp. 3+Open network.

## BUSINESS

### H-P Hits \$10 Billion In Orders

CALIFORNIA, 1988 NOV 19 (NB) — Hewlett Packard says it had a 22 percent increase in net revenue and a 27 percent increase in net earnings for its 1988 fiscal year ending October 31. Net earnings per share rose 34 percent, and orders exceeded \$10 billion for the first time in company history.

"Reaching \$10 billion in orders is a major milestone for our company and a momentous achievement for our people," bragged John Young, HP president and chief executive.

### Lotus Target For Takeover?

Boston MA (NB) Lotus Corp. which may be a target for a leveraged buyout or hostile takeover, has adopted a so-called "shareholder rights plan" designed to ward off takeovers. Under the plan, shareholders of record on November 23 will receive a dividend of one right to additional Lotus preferred stock for each share of common stock owned. The rights can be exercised 10 days after the announcement that a person or group of investors has acquired at least 20 percent of Lotus common stock or 10 days after such a group begins a tender offer. Lotus says it knows of no plans by anyone to try to take over the company.

subishi, NEC, and Fujitsu, will expand monthly production to five million units and Hitachi to four million units by March.

## CANADIAN NEWS

### Another Canadian Terminal Maker Has Money Troubles

MONTREAL, 1988 NOV 18 (NB) — Comterm Inc. will offer its creditors a proposal for restruc-

NEWSBYTES by Wendy Woods (Western USA), Ken Maize (Eastern USA), Dana Blankenhorn (South & Midwest USA), Masayuki Miyazawa and Keizo Yamamoto (Japan), Grant Buckler (Canada), Steve Gold (UK) and Peter Vekinis (Europe) Copyright © 1988 NEWSBYTES. NEWSBYTES Canadian bureau chief is Grant Buckler, Source ID IP2008, PC Canada ID PC1176, (416) 285-0644, #203-859 Kennedy Rd., Scarborough, Ontario M1K 2E3.



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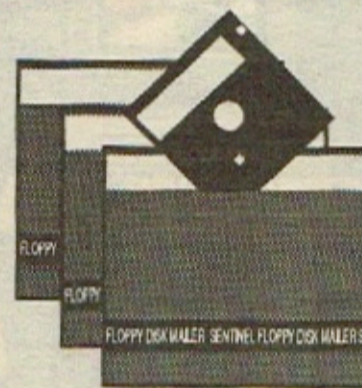
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turing its debt. The Montreal company is the second Canadian terminal manufacturer to take extraordinary action as a result of financial trouble within a month. On October 31, Lanpar Technologies Inc. of Markham, Ontario, asked to have trading in its shares halted on the Toronto Stock Exchange while the company negotiated with an unnamed third party. Lanpar is believed to be discussing a possible takeover. Comterm also is holding discussions with a corporate suitor, said Ragoi Mikhail of Richter & Associates, a Montreal firm that is acting for Comterm.

Comterm will file a proposal to its creditors under the Federal Company Creditors Arrangements Act, a little-known insolvency law under which the company's options remain open if creditors reject its proposal. The proposal is expected to be worked out by December 19, Mikhail said, and a creditors' meeting has been scheduled tentatively for January 31.

Though Comterm has been a terminal manufacturer for most of its history, some may remember its brief foray into PCs. Under the name Bytec

Comterm in the early 1980s, the company briefly marketed the Hyperion, an early IBM-compatible luggable computer that got considerable attention at first but foundered due to imperfect compatibility and other misfortunes.

### Toronto Show Attendance Down, Bookings For Next Year Booming

TORONTO, 1988 NOV 17 (NB) — Organizers of the Canadian Computer Show say that although attendance at this year's show was off slightly from last year, bookings for next year are going faster than ever before. Industrial Trade and Consumer Shows had not yet released final attendance figures when Newsbytes went to press, but the company said that as of November 16, 68 per cent of the show's exhibit space for 1989 was already booked. ITCS attributed the heavy bookings to an increase in the sales generated at the show.

The organizers also announced that next year's show will be held nearly a month earlier, from October 23 to October 26. "This change in date

will undoubtedly benefit exhibitors, attendees and the media by eliminating conflicts with other trade shows," Industrial Trade and Consumer Shows said in a prepared statement. This year's show coincided with Comdex in Las Vegas. Next year's Comdex is scheduled for November 13-17.

### Lanpar Stock Ceases Trading,

MARKHAM, ONTARIO 1988 Nov 4 (NB) — The stock of Lanpar Technologies Inc. ceased trading on Toronto Stock Exchange October 31 at the company's request. No reasons for the halt have been given. On Friday, trading still had not resumed, nor had the company made an announcement.

Lanpar officials did not return telephone calls from NEWSBYTES. Graeme Kirkland, an industry analyst at Third Capital Corp. in Toronto, said that while he had no official information, he suspected the trading halt is related to continuing losses by Lanpar's computer terminal manufacturing operation.

In the year ended January 31, 1988, Lanpar lost C\$4.6 million on revenues of C\$41.5 million. In the previous fiscal year, it lost C\$3.5 million on revenues of C\$42.3 million. Kirkland said that with such financial problems, Lanpar "is ultimately going to end up in a situation where it will either have a financial crisis or do a refinancing or be taken over."

## CD-ROM

### Simulation Of CCINFODISK

HAMILTON, ONTARIO 1988 NOV 7 (NB) — The Canadian Centre for Occupational Health and Safety now offers a simulation of its CD-ROM product CCINFODisc on floppy disks. The demo version contains two floppy disks of sample records in both French and English. CCINFODisc contains databases of occupational health and safety information.

### Microsoft Ships CD-ROM Business Consultant

REDMOND, WASHINGTON 1988 NOV 8 (NB) — Microsoft is now shipping a new CD-ROM-based reference library called Microsoft Small Business Consultant, and version 4.01 of MS-DOS. The Consultant is a collection of reference materials, 220 in all, of interest to the small business owner. This is the third CD-ROM product the company has shipped; previously it has shipped Microsoft Programmer's Library and Microsoft Bookshelf on CD-ROM.

### Sony First To Ship

### Erasable Optical Drives

SAN FRANCISCO (NB) — Despite the hubbub surrounding the new Canon rewritable optical disk drive coming on Steve Jobs' NeXT workstation, another firm, Sony, is actually shipping similar drives to original equipment and computer manufacturers. Sony, of Park Ridge, New Jersey, says its SMO-S501 subsystem and SMO-D501 drive stores 650 megabytes of data on rewritable cartridges that conform to current international standards. They should, therefore, be usable on optical drives from other manufacturers which have adopted the ANSI (American National Standards Institute and International Standards Organization) specifications. Optical drives conforming to these standards are promised from Maxtor, Sharp, Hitachi, and Olympus, all of which promise their optical drives will be available next year. The Canon drive used in the NeXT workstation, however, is not expected to conform to ANSI standards.

Sony says while it has agreements with manufacturers, none can be currently announced. The drive is priced at \$4,650 to OEMs.

## COMMODORE

### Commodore Pushes DOS, UNIX Solutions

LAS VEGAS, NEVADA, 1988 NOV 19 (NB) — While most attention at the Commodore booth was focused on new applications for its Amiga color computer, including desktop video applications, the company also made some moves to get back into the DOS-Unix mainstream. For those who require MS-DOS the company has brought back to America a full line of PC-compatibles. For those who love Unix, Commodore offered a version of Unix System V called Amix running on the Amiga 2500 UX, a workstation based on the Amiga 2000. The 2500, which is based on the Motorola 68020 chip, also runs AmigaDOS.

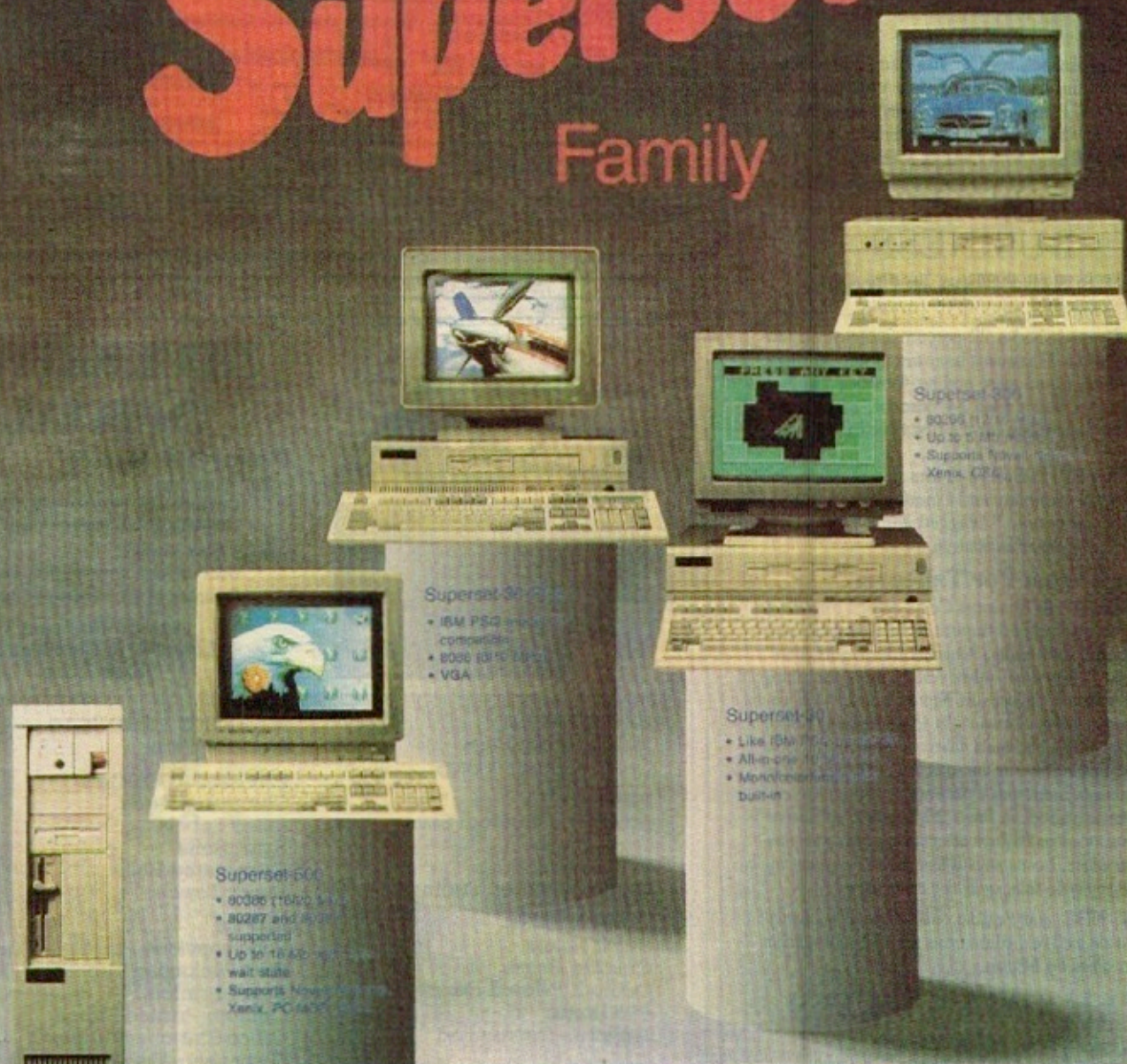
### Toronto World Of Commodore: First Weekend In December

TORONTO 1988 NOV 7 (NB) — Commodore Business Machines Ltd. will hold its annual World of Commodore show at the Toronto International Center December 1-4. More than 100 exhibitors are expected to be on hand with Commodore-related products, and Commodore expects upwards of 40,000 visitors. There will also be free seminars and an exhibit commemorating Commodore's 30th anniversary.

### Commodore Offers New 286, Shows Strong Profits

WEST CHESTER, Pa. (NB) — Commodore Business Machines is shipping a 12 megahertz

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80286 AT clone. The PC40-III has a megabyte of memory, VGA graphics, a 5.25 inch floppy and a 40 megabyte hard disk. The base price is \$2,395, and a paper-white monitor adds \$200.

Commodore has also provided evidence that its return to financial health continues. The company says profits climbed 52 percent in the company's first quarter, and a 15 percent increase in revenue. Commodore earned \$9.6 million (30 cents per share) on \$200 million in revenue for the quarter. That compares to profits of \$6.3 million (20 cents a share) on sales of \$174 million for the first quarter of last year.

## German Chip Magazine Puts Commodore PC20 At Number 1

MUNICH, WEST GERMANY (NB) — CHIP magazine, in its monthly breakdown of best sellers, finally put the Commodore PC20 at number one position for November 1988. The PC20 is followed by the Compaq Deskpro 286, Tandon PCA (Tandon is experiencing great success in Europe), and by the Schneider PC2640 (there are rumours that Schneider will do better now that it has split up from Amstrad and its products are designed in Germany).

Continuing the list, the Amiga 2000 (soon to be followed by the Amiga 3000 to be introduced at Comdex) is followed by the Commodore PC40, the Tandon PAC, the IBM PS/2 model 60 (the IBM model has taken a fall in sales), the Amstrad PC1640, and finally the IBM PS/2 model 30. You will notice that the impact of the PS/2 model 286 has been very limited at present in West Germany.

In the home computer list, Commodore heads with the 64 and the Amiga 500, with Amstrad 6128 and 464 following close. At fifth place is the Schneider EURO-PC, followed by the Commodore 128D, the Atari 1040ST, Atari 520-STM, Amiga 1000 and the Amstrad Joyce Word processing system.

## DATABASE

### Dbase IV Finally Ships

TORRANCE, Ca. (NB) — Ashton-Tate has delivered on its promise to ship the latest version of its popular database program by the end of the month. The first copies of the \$795 dBASE IV went out the door beginning October 24. Ashton-Tate is also shipping dBASE IV Developer's Edition (\$1,295) and dBASE IV LAN Pack. The firm also promises to have an OS/2 version of dBASE IV during the fourth quarter of 1988 and will offer a version that communicates with mainframes and minicomputers, which it is designing with Microsoft and Sybase Inc.

The new dBASE has several new features, including embedded SQL language, more security features, a conversion utility, a new forms manager, and supports various local area networks. Upgrades to the new dBASE by owners of its previous incarnations are available at a low cost.

### Ashton-Tate Sues Foxbase Maker

TORRANCE, CALIFORNIA, 1988 NOV 19 (NB) — Ashton-Tate has sued the maker of the FoxBASE+ database product, claiming it copies the look and feel of four versions of dBASE, its own database software. Fox Software and Santa Cruz Operation Inc., another seller of a modified FoxBASE product, were both slapped with the suit in U.S. District Court in Los Angeles. Ashton-Tate says the program steals not only the look and feel but the underlying concept, programming language, and user interface of its own highly-successful database program. The suit seeks unspecified damages and an injunction against further sales of FoxBASE.

Fox and SCO could not be reached for comment by Newsbytes' deadline.

## DTP & GRAPHICS

### Laser Friendly In 'Suspended Animation'

TORONTO, 1988 NOV 18 (NB) — Laser Friendly Inc., maker of The Office Publisher desktop publishing software, has laid off all its employees and closed its offices. The company's present state could be described as suspended animation, according to Lynn Barrett, vice-president of communications for Print Three Inc., which owns Laser Friendly.

Barrett said sales of The Office Publisher have not met expectations and Laser Friendly "just

couldn't afford to continue at that rate... so they've cut their overhead." ComputerLand, Print Three and Olivetti continue distributing The Office Publisher in Canada, she said. Laser Friendly's former U.S. subsidiary in Redwood, Calif., now an independent company named The Office Publisher Inc., also sells the software. When existing inventories of the software are exhausted, "then Laser Friendly will probably hire some people and make some more."

## GENERAL

### Computer Unmasks Drug Runner

WASHINGTON, 1988 NOV 22 (NB) — Using a sophisticated computer matching system, deputy U.S. marshals have discovered that Paul Matthews, a prosperous and civic-minded South Florida businessman, is Nicholas Hunter-Reay, an alleged drug dealer. Hunter-Reay dropped out of sight after a federal indictment tied him to Colombia's Medellin cocaine cartel. Hunter-Reay was among 218 drug fugitives picked up in a 10-week computerized manhunt. According to Stanley Morris, director of the U.S. Marshals Service, the computerized search also resulted in seizure of more than U.S.\$1.26 million in criminally-obtained assets, including cash and real estate.

The key to the computerized manhunt was a program called "Scorecard," written by Ron Wuthrich, who works in the Marshals Service enforcement division. "Everyone leaves a paper or number trail someplace," Howard Safir of the Marshals Service told United Press International. "What the Scorecard computer does is track those things."

### Virus Grand Jury Is Sitting

Syracuse, NEW YORK, 1988 NOV 22 (NB) — A federal grand jury is meeting to consider charges that a Cornell University graduate student created a computer virus that disrupted computer systems nationwide. Assistant U.S. Attorney Andrew Baxter refused to tell the Associated Press when the panel began hearing evidence or whether witnesses have been subpoenaed to testify. Cornell student Robert Morris is suspected of sending the virus through a government computer network, disrupting operations at 6,000 university and military computers.

In the meantime, the director of the Computer Virus Industry Association in Santa Clara, Calif., estimates that the virus did at least U.S.\$97 million in damage. John McAfee says the virus caused more than a million hours of unnecessary work. "We had the equivalent of an enormous manufacturing plant standing idle incurring all its overheads and wage costs, but unable to produce anything because it had to be evacuated as a result of a bomb threat," says McAfee.

### Einstein Was Wrong Says UK Electronics Magazine

LONDON, 1988 NOV 19 (NB) — The December issue of Electronics and Wireless World carries a contentious article on measuring the speed of light. The article, penned by Professor P.T. Pappas and Alexis Obolensky of New York, postulates that objects can travel faster than light. This is in direct conflict with Einstein's Theory of Relativity.

The two academic authors have designed and built an electronic circuit which measures the speed of light to great accuracy using a highly-sensitive oscilloscope. The results of their tests have concluded that the speed of light varies with the direction, time of day and polarity of current uses. The experiments also showed that many pulses travel at two or more times the speed of light through the circuit. Most astonishingly of all, certain pulses travel virtually instantaneously through the circuit.

The experiment reports are bound to create quite a controversy in the academic world. If correct, however, then the implications for computers are tremendous. Given the right conditions, computer calculations could be speeded up, far beyond current processing speeds.

### "Home Office Computing" Replaces "Family Computing"

LAS VEGAS, NEVADA, 1988 NOV 19 (NB) — Scholastic Inc., best known as a publisher of children's magazines, has abandoned the family market with a complete re-do of the magazine it

once called "Family Computing." The new entry, "Home Office Computing," is a cross between "Venture," "Savvy," and "PC Magazine," with a small section on games software to prevent old advertisers from pulling out too soon. A lot of money has been thrown at the new book, with a clean new layout, a new list of editors, and freelancers drawn mostly from the business press rather than the computer press.

The November issue features an article on getting a loan, a guide to fax machines, a story about online universities, and a short piece on game software — give entertainment editor Jim Phelan a game hint he can use and you can win something free.

### Companies Ignorant Of Reproductive Health Hazards: Study

BOSTON, MASSACHUSETTS (NB) — The ignorance of the hazards that common chemicals used in electronics and computer companies may be putting workers at risk, according to a study done by the Massachusetts government and the University of Massachusetts Medical Center. The study found that thousands of women and men may be exposed to risks because of confusion on the part of company management, said The Boston Globe, which obtained a copy of the study. The study examined practices in 149 computer and electronic companies, and 49 chemical companies in the Bay State.

More than half of the companies said they used one or more of four known reproductive hazards: glycol ethers, lead, organic mercury, and radiation. Only 40 percent said they were aware of the potential dangers. Only 20 percent said they restricted workers from production lines because of reproductive risks. Some restricted only pregnant women, some all women. No company transferred men from production lines, although, the study said, glycol ethers pose a greater risk to men's reproductive system than to women's.

"There's definitely a lack of awareness about reproductive hazards among these firms," Dr. Mureen Paul of the UMass Medical Center told the Globe. "We've got to get better education going out there."

### Software Sales Soar

WASHINGTON (NB) — Sales of personal computer grew 48 percent for the first nine months of 1988, according to the Software Publishers Association. Sales hit \$U.S.2.8 billion, with DOS programs accounting for \$U.S.2.2 billion of that. Macintosh software was the fastest growing, showing an 87 percent sales jump, to \$U.S.302 million. Productivity software sales soared 54 percent, while language and utility software jumped 32 percent, games rose by 26 percent, and educational sales went up 19 percent.

### Cornell Student Was Virus Maker, Says School

ITHACA, N.Y. (NB) — Cornell University says it believes that computer science graduate student Robert T. Morris Jr., 23, created the virus that infected 6,000 computers nationwide. The university said it found unauthorized codes and passwords in Morris's computer files. The student's father is Robert Morris Sr., 56, chief scientist at the National Computer Security Center in Bethesda, Md. The security center is part of the National Security Agency, in charge of protecting top secret government computers from penetration. The elder Morris has written widely on security of the Unix operating system.

The younger Morris took advantage of a known problem in Unix to plant the virus in Arpanet, the Defense Department's unclassified network that links many universities, research centers, and defense installations. According to sources who discussed the issue with The New York Times, Morris intended to create a benign virus that would sit undetected in infected computers, spreading very slowly. His intent, the sources told the Times, was to highlight security problems in Unix networks. But a coding error started the program replicating itself rapidly. The out-of-control virus soon filled disk drives with spurious data, causing systems to eventually grind to a halt.

So far, the younger Morris has not appeared in public. According to the Times, he is expected to travel to his home near Washington, to discuss the case with lawyers. Meanwhile, the FBI says it is investigating whether federal laws were broken in the spread of the virus.

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## Frankenstein Virus Infiltrates Nationwide Computer Network

ATLANTA (NB) — A computer virus, which sets the CPUs it infects to making huge, meaningless files, closed down university and military computer systems around the U.S. on November 2-3. A caller to The New York Times, claiming to be a friend of the author, a graduate student, said the virus was first put onto the ARPANET research network and was supposed to be relatively harmless, but a bug crept in which made it highly virulent. NEWSBYTES has thus designated this the Frankenstein virus, because it's gotten out of hand and will likely destroy the career of its maker.

In Atlanta, Georgia Tech officials said the virus appeared in the school's main computers around midnight on November 3. It was visibly slowing down operations by early that morning. "It came into Internet through the e-mail system," Richard LeBlanc, associate professor at Tech's School of Computer Science, told NEWSBYTES, adding that it died once the school's main computer was turned off.

"It needed a live CPU to live," he explained. The virus was also found at hundreds of colleges nationwide, including Harvard, MIT, the University of Maryland, the University of California in Berkeley and San Diego. Government institutions infected included the Naval Research Center, Naval Ocean Systems Command, NASA's Ames Research Center in Mountain View, Calif., and the Lawrence Livermore Laboratories.

The Frankenstein virus is certain to renew calls to disconnect government and university computers from each other, and is likely to hurt the online business generally. LeBlanc notes that ARPANET is a totally open network, and relies for security on an unwritten code among the thousands of system administrators and lab assistants who run it that they won't do something like this. LeBlanc adds he's uncertain whether any laws were broken by the virus' author, however, since no data was destroyed, only created. Whether the code of trust which keeps Arpanet and other non-secured networks alive can survive this latest test remains to

be seen.

## Full Spectrum Lighting Cure For VDT Blues?

SANTA BARBARA, Ca. (NB) — As you sit at your terminal squinting at the screen, are your bones also getting soft, your teeth getting cavities, does your head hurt, do you feel restless, irritable, even depressed? It may be the light. Research is showing that "malillumination," or artificial light can be to blame in many a case of computer fatigue. Enter a new computer accessory — full-spectrum lighting as dictated by light research pioneer Dr. John Ott.

Dr. Ott, a photobiologist who has explored the subject of light and health for sixty years, has helped design a complete office lighting system that duplicates the light spectrum put out by the sun. The computer light, which hangs above a terminal, is \$U.S.379.95 although there are also floor-standing and table models of the Ott Lights.

Want more information? You can write Dr. Ott at PO Box 40004, Crescent Beach, Sarasota, Florida, 34342. Include a self-addressed, stamped envelope. Or you can order the Ott Lights and get literature on the subject from Ott Light Systems, 306 East Cota Street, Santa Barbara, Ca. 93101 (805) 564-3467.

## Cogswell First College To Offer Music Technology Degree

CUPERTINO, Ca. (NB) — Where else but in Silicon Valley would there be a college that offers a degree in music technology? Cogswell Polytechnical College, a small, private, four-year institution, is offering a music technology certificate, consisting of a series of eight courses, this fall and will offer a Bachelor of Science degree in Music Technology through its School of Engineering, starting in the fall of 1989.

The certificate course consists of MIDI, synthesis and sampling, and applications of music technology, "everything there is to know about MIDI, interfacing computers, and sound design," Dr. Ted Kastelic, Cogswell's Director of Science and Engineering told NEWSBYTES.

This is the first degree program of its kind in the U.S., as far as Cogswell officials can tell, although the University of Miami has a music technology degree through its music school. "Eighty percent of the interest we're getting (from recruitment drives) is in this music program," Kastelic explained, saying he expects demand for the new course of study to be high.

There will be no shortage of hardware to augment theory. Casio has donated \$U.S.30,000 worth of synthesizers and samplers, Atari has given the school ten 1040 ST computers, E-mu has donated two E-mu samplers, and software has been given by Passport Designs of Half Moon Bay, Ca. The school's advisory board on the new music program includes Scott Wedge, president of E-mu Systems, Dave Kusek, president of Passport Designs, and Dominic Milano, editor of Keyboard magazine.

## Microsoft Cofounder Gives \$U.S.10 Million To University

SEATTLE (NB) — Microsoft cofounder Paul Allen has given more money to the University of Washington than anyone in its history, providing the University with \$U.S.10 million. The money is expected to be used to enhance and maintain its library collection and programs and to help finance a new addition to the library complex.

Given on behalf of his late father, Kenneth S. Allen, once an associate director of the University of Washington library, the gift was made months ago by Paul Allen, but only revealed at a Regents meeting on October 28. Allen is estimated to be worth some \$U.S.600 million dollars.

UW officials say the gift also ranks among the largest ever given to any institution of higher learning anywhere in the world.

## JAPAN

### U.S. Disapproves Tron As Education Computer

TOKYO, 1988 22 NOV (NB) — The U.S. Commerce Department has expressed a complaint

against the Japanese-proposed TRON architecture, which is being adopted as the educational computer operating system (OS) here in Japan, reported Denpa newspaper. The representative of the U.S. government said in his letter to the Ministry of International Trade and Industries that Japan's decision to adopt Matsushita Electric Industrial as the main supplier of the education computer OS unduly oppresses American firms' access to the Japanese education computer market, and also infringes on international rules. The U.S. is deeply concerned that the endorsement of the TRON architecture will challenge its own standards, namely MS-DOS, Unix, the Macintosh OS and OS/2.

Meanwhile, American computer manufacturing firms are split on this issue. IBM and other hardware makers have no complaints; however, software makers, including Microsoft, reluctantly maintain Japan's computer projects must be its own, without consideration for overseas companies.

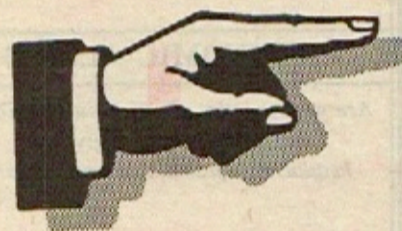
## Computers In Deep Space

TOKYO (NB) — Mitsubishi Electric Corp. has announced it has successfully developed a high-reliability computer which can be used outside the earth. The computer automatically detects and excludes errors caused by radioactive particles in the universe, which are harmful to computing operations, and it will be applied on artificial satellites, according to the company. The machine operates at a whopping 20 to 30 million instructions per second. Mitsubishi is further studying ways to beef up the data processing speed to 100 MIPS.

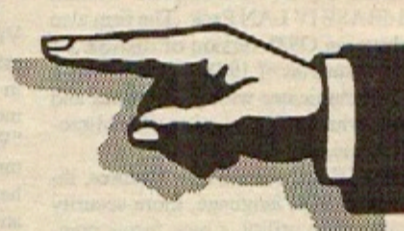
## Makers Hand-In-Hand To Produce AX PCs

TOKYO (NB) — It has been revealed that some AX personal computers, Japanese versions of IBM PC/AT-compatible machines, are being supplied to other members of the AX group on an OEM or original equipment manufacturing basis.

According to industrial sources, Sharp has begun marketing AX laptop PCs originally made by IC

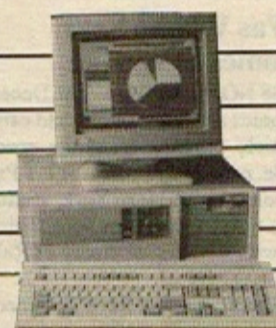


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ceramic manufacturer Kyocera, and Casio will enter the AX market with AX PCs made by Mitsubishi. Canon now produces and markets its own AX PCs but expects increasing demand them. Consequently Canon is preparing to receive OEM supplies of these computers from Taiwan-based PC maker, Acer.

The AX PCs have been priced about 100,000 yen or \$U.S.800 more than other PCs, such as NEC's or Fujitsu's original PCs. But the AX group is aiming to cut development and production costs with these supplies and hopes to gain over 10% of the PC market with competitive pricing by next year.

Meanwhile, Canon has launched a plan to increase its present thirty Apple agents to one hundred within two years and use these people for sales of AX PCs. Further, Hewlett Packard says it will join in the AX market with its 16-bit HP Vectra AX next April.

## LAPTOPS

### Laptops And The Success Of Traveling Software

LAS VEGAS, NEVADA, 1988 NOV 19 (NB) — President Mark Eppley of Traveling Software, Bothell, Wash., was one relaxed, happy camper at the Fall Comdex show. While everyone was remarking on the wide breadth of laptop computer offerings — Epson, Toshiba, Zenith, Compaq, NEC, Sanyo and Sharp were just a few of the firms rolling out new lap models — few noticed how Eppley's LapLink file transfer program had become a de-facto standard in this market. LapLink is a relatively simple utility for moving files over serial cables with RS-232 connectors between laptop and desktop PCs. But if your company has both kinds of computers, LapLink or something like it becomes a necessity.

This adds to the significance of two deals Eppley announced. First, Toshiba agreed to offer a private-label version of LapLink for its laptops. Second, NEC agreed to bundle LapLink, in ROM, or read only memory, with its four-pound UltraLite laptop. Those deals made it easy for Eppley's folks to update LapLink Mac, which is a version for the Macintosh, as well as DeskLink, a version of the program which creates a de-facto network for small offices.

Traveling Software also released a new version of its Battery Watch utility, which replaces the "idiot light" on most laptops with a pop-up gauge showing how much power your batteries have, and offered a new version of its catalog, which features both its own products and those of other firms. All of which means Eppley can make money both coming and going from the laptop revolution.

### Toshiba Introduces More Powerful T3100 Laptop

IRVINE, CALIFORNIA 1988 NOV 11 (NB) — Toshiba America's Information System Division has unveiled an upgrade to its T3100/20 portable computer, the T3100e (e for "enhanced"). The new laptop features a better screen, lighter weight, and a lower price. The machine is two pounds lighter than the T3100, weighing in at 12.8 pounds. The screen features better contrast, and the price is \$U.S.400 less. Dealers expect the T3100 to be discontinued in favor of this new model, which will ship this month.

### Laptop Workstation Introduced From Toshiba

TOKYO, JAPAN 1988 NOV 15 (NB) — Toshiba Corp. has released a new laptop personal computer, the J3100, a Japanese version of the Toshiba T3100. Dubbed Express J-3100SL 021 Model, the 16-bit laptop computer has a backlit liquid crystal plasma display with a resolution of 640 x 400 pixels. The display also has brightness or contrast tuning, and supports a reverse mode. The machine has Intel's i80C86 at its core, and a 20 megabyte hard disk drive unit. The Enhanced version of Japanese MS-DOS is bundled with the machine, and the original (English) MS-DOS is also available as an option.

The system is measured at 311mm width x 330mm depth x 83mm height, and weighs 5.7kg. The price is 448,000 yen or \$U.S.3,600. Toshiba has set the machine's sales target at 10,000 units by March of next year.

## New Compaq

### Laptop Already Bettered?

HASBROUCK HEIGHTS, NJ (NB) — Proteus Technology is said to be nearing completion of its first '286 laptop. The new entry, to be assembled in the U.S., will offer capabilities similar to the new Compaq and Sharp units recently reported in Newsbytes.

There are also some differences. Its 640-by-480 VGA display is a gas-plasma unit rather than an LCD and may offer either 4 or 16 shades of grey. (That aspect of the design is not yet final.) Standard serial, parallel and VGA ports are also planned.

The unit's hard disk will come in either 20 or 40 MB capacities but measures a scant 2 1/2 inches. Smaller drive dimensions will reduce the weight of the machine to approximately ten or eleven pounds. The drive's low power requirements will also reduce the energy consumption and allow the unit to operate up to four hours on a charge. One more dimension will be reduced: The 20 and 40 MB units will be priced at approximately

\$U.S.2500 and \$U.S.2800 respectively. Although they have yet to be confirmed, that's about half the price of the recently announced alternative from Texas.

If all of the above weren't enough there's an even bigger surprise in development. A future version is planned that will offer docking in a manner quite different and more convenient than that of the Compaq. The desktop unit will be much more like a standard PC. From the detailed description I've been given, I would say that the Proteus docking method will be the ultimate realization of this strategy.

## Grids In Space

FREMONT, Ca. (NB) — GRiD Systems says its laptops will be aboard the space shuttle Atlantis this month. Astronauts will use them to track the shuttle's course and help photograph the earth, says GRiD's President and Chief Executive Sam Wiegand. The ride into space for the two laptops will be nothing new for GRiD, whose laptops have been aboard some 20 shuttle missions since 1983. At this point, however, they have a proven track

record and have "performed reliably." NASA has ordered several GRiDCase model 1530 laptops which are powered by the Intel 80386 microprocessor. NASA will use the most powerful models to "explore the computer's feasibility to support future missions beginning in mid-1989."

## Power to Spare

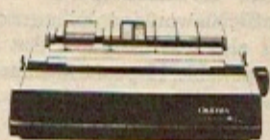
The EVER-READY battery company has developed a lithium battery cell that has twice the life of equivalent alkaline cells. The company plans to launch a series of disposable batteries for laptop computer users in the second quarter of next year. Pricing on the new batteries is expected to be comparable with existing alkaline units...

## MACINTOSH

### Abaton Ships Integrated FAX/ Data Modem

FREMONT, CALIFORNIA, 1988 NOV 9 (NB) — Abaton is shipping the InterFax 12/48, a fax/modem for the Macintosh II, SE, Plus and 512KE. The InterFax combines fax sending and receiving

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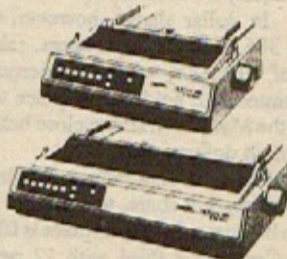


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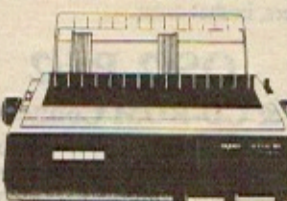


• **320/321** - 300 cps draft, and 63 cps near letter quality. Available in either 80 or 136 columns, with easy to use front panel feature selection and paper park, these are the fastest utility 9-pin printers in their class. Real workhorses!

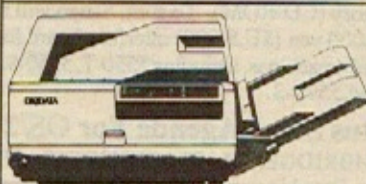


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### Sculley Sells 1/3 Of His Stock

SAN FRANCISCO, 1988 NOV 15 (NB) — Apple Computer Chairman John Sculley has sold 50,000 shares of his Apple stock at about \$U.S.43.00 per share, according to the Securities and Exchange Commission. The sale would have grossed \$U.S.2,150,000 for the Apple chief, who still holds 109,357 shares. Apple will not comment on the stock sale, saying it's the business of individual executives. The sale took place on August 8 and amounted to almost a third of Sculley's total stock holdings in Apple.

### New Mac SE Due In January

SAN FRANCISCO, 1988 NOV 18 (NB) — Apple Computer will unveil a powerful new Macintosh SE which will rival the power of its current Macintosh IIX, according to the San Francisco Examiner. The report says the SE will use Motorola's 68030 microprocessor, will support between four and eight megabytes of random access memory, and will have an optional 40 or 80 megabyte hard disk drive. The machine will have two expansion slots and a built-in black and white screen, as well. The news hit some industry observers by surprise since it appears to target a new SE at the same market segment targeted for the II and IIX. Even reporter Paul Frieberger noted that his same sources report product plans have been changed repeatedly due to internal squabbling at Apple. "There are constant discussions about what's going to happen next," his source reports.

Apple officials would not comment on the story. Sources also told the paper that Apple will introduce a portable, 12-pound Macintosh, a lower-priced Macintosh II system, and a high-end Macintosh II in 1989.

### Wingz Delays Shipping

LENAXA, KANSAS 1988 NOV 11 (NB) — Informix Software has announced yet another delay in the release of Wingz, its spreadsheet for the Apple Macintosh. Informix says the product will not be out in 1988 as had been hoped, and will announce a new release date within a few weeks. Douglas Edwards of Informix says the delay is due to implementation of the HyperScript application development language and that there are "no significant technical obstacles" in the way.

### Mac SE Hottest-Selling Micro

CUPERTINO, CALIFORNIA 1988 NOV 11 (NB) — The Macintosh SE was the fastest-selling microcomputer in July, according to InfoCorp, a market research firm. The SE held 7 percent of all micro sales followed closely by AST Research's Premium 286 which held 6 percent of all sales. Epson's Equity 1 was in third place with 5 percent of sales. In dollar shares, however, Compaq's Deskpro 386 took the top honors, raking in 13 percent of all money spent on microcomputers. The Macintosh SE held second place with 8 percent and the Macintosh II was close behind with 7 percent of all dollars spent.

Among all firms selling micros, Apple holds the lead in unit market share, winning 19 percent of the micro business. In second place is IBM with 14 percent, Compaq is third with 12 percent, and Epson, AST, Hyundai, Kaypro, and NEC all trail the leaders, in that order.

## OS/2-PS/2

### MCA & CD-ROM Connected

TOKYO, 1988 22 NOV (NB) — Sanyo Electric Co., Ltd. will roll out interface boards which connect IBM's Microchannel Architecture (MCA) personal computers with compact disc read-only-memory (CD-ROM). To start, Sanyo will release a 98,000 yen (\$U.S.800) interface board for IBM Japan's machines, including 5550-T, 5550-S, 5570-T, and 5570-S.

### Lotus Ships Agenda For OS/2

CAMBRIDGE, MASSACHUSETTS (NB) — Lotus Development Corp. has begun shipping its Agenda personal information management software for the OS/2 operating system. Lotus says the features and functionality of the OS/2 version are identical to the DOS version of Agenda, the new product is able to use up to 16 megabytes of

addressable memory. "Lotus believes that it's important to extend the benefits of Agenda to OS/2, given the significance of this operating system as we move into 1989 and beyond," said Michael Kralcy, director of personal information management software for Lotus.

Agenda for OS/2 is available immediately to current Agenda/DOS users via a toll-free number: 800/345-1043. Future purchasers of the DOS version of Agenda will find an Agenda for OS/2 request card in each product box. The cost for the OS/2 version upgrade in either case is \$U.S.25.

### Presentation Manager Ships

NEW YORK (NB) — Microsoft and IBM have made good on their commitment to ship Presentation Manager, the graphical user interface for IBM and compatible machines, on time. On Halloween, the two firms held a joint news conference to announce Presentation Manager was complete and out the door. The last part of the OS/2 operating system, the "largest software development project the PC industry has ever seen," according to Microsoft Chairman Bill Gates, Presentation Manager gives IBM computers an interface with icons and pull-down menus, an idea popularized on the Apple Computer Macintosh. The project took 18 months, hundreds of thousands of man-hours, and consists of some 400,000 lines of software code.

OS/2 with Presentation Manager provides full support for protected mode operation of Intel 80286 and 80386-based personal computers, allowing users to tap up to 16 megabytes of real memory of one gigabyte of virtual memory through a standard graphical user interface that makes OS/2's key features, such as multitasking, simple and intuitive to use.

Of the on-time announcement, Esther Dyson, industry analyst and inventor of the term "vaporware" for software which does not materialize commented, "It's nice to see something that ships on time. It shouldn't be news, but it is." Unfortunately, there are still few programs that take advantage of OS/2 and Presentation Manager, although many companies have expressed plans to create some. Borland announced Sidekick for Presentation Manager will be available by the end of this year. Other companies, Aldus, Ashton-Tate, Computer Associates, Digital Research, Lotus, mds, Micrografx, Microrim, Software Publishing, 3Com, and Versacard, all announced their support for OS/2 and Presentation Manager with forthcoming products.

Microsoft intends to support the OS/2 1.1 operating system with Microsoft Excel for Presentation Manager. But the company will not say when it will be available.

## PC NEWS

### Workers Challenge IBM

#### South Africa Policy

MANASSAS, VIRGINIA, 1988 NOV 22 (NB) — In an unusual move, 61 International Business Machines employees have signed a request for IBM shareholders to vote next April to stop all business with South Africa. About half the employees who signed the petition work in the Washington D.C. area, IBM physicist James Leas told the Washington Post. "I feel that selling computers to almost exclusively white customers in South Africa gives support to the apartheid system and makes IBM complicit with apartheid," Leas said. IBM workers are known for their company loyalty and seldom criticize the company in public. IBM management has made a commitment to take no action against the employees.

### PC-WRITE 3.0 Ships

SEATTLE, WASHINGTON, 1988 NOV 19 (NB) — Quicksoft is shipping the latest update of PC-Write 3.0 and claims it has over 500 new features. The popular shareware program breaks the former 60 kilobyte file limit. Users can now create files as large as the DOS memory of their computer. There are new formatting and printing capabilities including a facet which allows users to format text in multiple columns, edited on screen, and stored as columns in the file. There are 219 new printer drivers, bringing the total of supported printers to 607.

PC-Write and Friends is the name of a new catalog of 32 other shareware titles from Quicksoft. It is available by calling the company.

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The success of PC-Write, since its introduction in 1983, has propelled Quicksoft from a \$U.S.17,000 a year company to one now making over \$U.S.2,000,000 annually in sales. The product is distributed as shareware; users can copy it and share it, and they can register for \$U.S.89 and receive current software, a printed manual, telephone support, and a newsletter. To encourage copying, users get a \$U.S.25 commission each time someone registers from one of their copies.

### Tandy PCs Resold Under Panasonic Name In U.S.

TOKYO, 1988 22 NOV (NB) — When you see a Panasonic IBM clone in your local retail shop, don't think it's made in Japan. It will be a U.S.-made machine from Tandy Corporation of Texas.

Matsushita Electric Industrial, the company making Panasonic products, will receive three series and eight models of personal computers on an original equipment manufacturing basis from Tandy Corp. and will consequently resell them as IBM-compatibles in the U.S. market.

Matsushita has stopped exporting its PCs to the U.S. because of the 100% tariff imposed on 16-bit machines in April of last year.

The company has been marketing printers and floppy disk drives in the U.S. market. With this agreement, it will be able to sell complete sets of systems, including PCs, under the Panasonic brand name.

### H-P: One Millionth Laserjet

Palo Alto, CALIFORNIA 1988 NOV 11 (NB) — Hewlett Packard says it has sold its one millionth LaserJet printer, more than all other vendors. HP introduced the first desktop laser printer, the HP LaserJet, in May 1984. "Selling the millionth HP LaserJet is more than just a sales milestone," boasted John Young, HP president and chief executive officer. "It also underscores HP's history of offering customers new benefits by delivering high quality, reliable products that advance technology."

The LaserJet series consists of the HP LaserJet, LaserJet Plus and LaserJet 500 PLUS printers.

### Wordperfect Wildly Successful

OREM, UTAH 1988 NOV 9 (NB) — The word processor of WordPerfect Corporation, usurping WordStar as the most popular word processing application, has brought home record-breaking revenues for the company. In the third quarter of this year, WordPerfect has sold \$U.S.50 million worth of the products, and sales for the year are 82 percent higher than last year's. The company says some 650,000 copies of WordPerfect have been shipped.

### Lotus Add-ons New Catalogue

Grand Junction, Colorado 1988 Nov 11 (Nb) — The first comprehensive guide to all the add-ons, the add-ins, and enhancement products available for users of Lotus 1-2-3 and Symphony has been published by Vericomp Publishing. "Making Lotus work harder for you — A directory of enhancement programs for Lotus 1-2-3 and Symphony" is \$U.S.19.95 and available directly from Vericomp Publishing.

The book contains information on 1,102 enhancement products from 476 vendors and has feature-oriented product descriptions, vendor particulars, product pricing, and information about the product's compatibility with the various versions of 1-2-3 and Symphony. The book also includes a post-paid postcard which allows users to request information on products in the book.

Orders may be placed by mail to PO Box 55238, Grand Junction, Colorado 81505; by calling 800-234-1140 in the U.S. or 303-241-5800 elsewhere; by FAX 303-242-8732; by MCI Mail at 3325-2479; CompuServe at 76010,3466 or by modem to Vericomp's BBS at 303-242-8741.

### IBM Upgrades Displaywrite, Offers New Educational Software

RYE BROOK, N.Y. (NB) — International Business Machines Corp. has rolled out two new products in the DisplayWrite word processor family. DisplayWrite 5/2 is a high-end word processor aimed for the OS/2 operating system. DisplayWrite 5/2 Composer is a page layout and document composition program also designed for OS/2. Additionally, IBM has announced DisplayWrite 4 Version 2.0, for DOS-based systems. It

has the functions of the earlier OS/2 product, DisplayWrite 4/2.

IBM has also announced LinkWay, a software product that lets educators develop their own specialized applications. The software includes the examples of a lesson plan, grade book, classroom resource manager, and to-do list, created with LinkWay. The software requires 383 kilobytes of memory, a mouse, and a single floppy drive. A single package is \$U.S.110, while a school license for 12 copies is \$U.S.495. Qualified educational institutions and hospitals are entitled to a 20 percent discount.

In further IBM news, the company has announced a device that helps people with speech and hearing problems learn to speak more clearly. SpeechViewer uses pictures on a PS/2 system to display speech attributes such as pitch, loudness, and timing. It gives the speech and hearing impaired instant feedback as they practice. IBM says the product resulted from a decade of research at the IBM France Science Center in Paris. The SpeechViewer kit of software, documents, and equipment costs \$U.S.1,200, not including the cost of a computer. Last January, IBM introduced Screen Reader, which lets blind users hear text displayed on their screens.

### Wang Fights Keyboard Phobia

LOWELL, Mass. (NB) — Concerned that top-level executives are uncomfortable with typewriter keyboards, Wang Laboratories has unveiled a system called Freestyle. The combination of hardware and software allows executives to use a special pen to mark electronic documents on a screen lying flat on the desk. An optional device allows the user to dictate messages that can be attached to the document. Freestyle is designed for personal computers using the AT bus. The basic system will run about \$U.S.2,000, while all the options will bring the price to around \$U.S.20,000, Wang said.

### The New Word From Microsoft

REDMOND, Wa. (NB) — Microsoft has announced Word version 5.0 for IBMs and compatibles running MS-DOS or OS/2 operating system. The product's new features include support for OS/2 systems and expanded memory, built-in network support, graphics integration, Print Preview, annotations, enhanced document management and retrieval, multiple columns on screen, and a simplification of common tasks. Microsoft claims speed has not been sacrificed and that in some cases version 5.0 is faster than version 4.0. Many of the improvements are designed for the desktop publisher who needs to resize graphics, see a documents layout and preview the finished product on-screen before it goes to the printer.

There is also more on-screen help, with 90 features online compared to the 30 in version 4.0.

The product is expected to ship on December 31, 1988 and has a suggested retail price of \$U.S.450. Users who buy Word before October 1 can upgrade for \$U.S.75. Those who bought it after get a free upgrade. Microsoft Word 5.0 requires a two drive IBM or compatible system with 512K minimum memory.

### TELECOMMUNICATIONS & FAX

#### Computing Canada On-Line Expanding

TORONTO 1988 NOV 8 (NB) — Computing Canada, the national computing newspaper, has announced expansion of its online service, Computing Canada On-Line. Starting next month, paying subscribers to CCO will get more news and other features. Free access will be reduced to 12 minutes per day for all Computing Canada subscribers. An annual subscription fee of C\$49 will buy 49 minutes' access per day. While all Computing Canada subscribers will retain free access to core services, many of the new services will be available only to paying subscribers. Expansion has already begun. A new Management Forum, devoted to training, was added last month, boosting CCO's on-line conferencing to five management forums and 11 special interest group message bases. More are planned. This month polling, a vehicle to solicit user responses to current industry issues, automatically tally those responses and distribute results on-line will be implemented. Next month, CCO will add more

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phone lines and other features.

Support for Telecom Canada's Datapac packet-switched network and iNet gateway service will provide lower long-distance rates for callers across Canada. Editorial copy from the biweekly printed edition of Computing Canada will be online sooner than before, the publishing firm said.

### Board Offers Exclusive Options

PASADENA, Ca (NB)—AmericanData Technology (ADTech) will announce two new fax boards at this Fall's COMDEX. The SMARTFAXplus will replace the original SMARTFAX as the company's top-of-the-line unit. The board adds several new optional features to SMARTFAX's 9600-bps fax modem. The second product will offer 4800-bps performance priced too low to leak.

Hardware options for the SMARTFAXplus include a 1200/2400 bps Hayes-compatible modem, an on-board scanner interface which supports either the Shapescan or Canon scanner (an HP Jetscan model is in development), DES encryption, hardware implementation of CCITT group-three data compression (for up to sixty times faster compression than typical software compression), automatic wake up (with an exclusive instant-on feature), and a stand-alone-fax interface (for using a local fax as a scanner or printer). With all options installed, the board occupies but a single slot.

### First FAX To Feature Mail Merge Rolls ...

ADTech also recently developed new software which operates across the product line. SMARTFAX software can be implemented as either memory resident (with pop-up send and background receive) or on demand. It provides screen capture and simple editing capabilities to add text or rotate images. The software also includes the ability to automatically convert files from several standard formats to fax-transmission format. ASCII text, PC Paintbrush, Dr. Halo, and Word-

Star are all supported. In addition, a separate utility will convert from TIFF format for transmission. Conversions for export are supported for Dr. Halo CUT, TIFF, PCX, and OCR System's Read-Right.

ADTech claims to be the first fax-board manufacturer to offer mail-merge for fax transmissions. The software's exclusive MassFax (TM) feature combines this mail-merge facility, for personalizing data, with broadcast capabilities. MassFax allows easy customizing for large numbers of automated transmissions. Signature and letterhead graphics can automatically be merged as well. Contact: (818) 578-1339, 578-1264 fax.

### MCI Enters The FAX Business

WASHINGTON, DC (NB) — MCI is creating a separate network to handle facsimile traffic. The MCI Fax network will let companies monitor fax use, get consolidated fax bills, and use the store-and-forward capabilities common to MCI Mail. MCI estimated that \$U.S.3 billion is now spent sending fax messages each year, and that the figure will grow to \$U.S.9 billion by 1991.

Using MCI Fax, you could broadcast a fax message to hundreds of machines at once with one call, adding a list of recipients. (Right now, fax users have to call each fax machine to which they're broadcasting separately.) PCs and telex machines will also be able to send messages to MCI Fax and have them translated into fax messages instantly. Orders are now being taken for service to start in late November.

### Minitel To Connect Its French And American Online Networks

WHITE PLAINS, NY (NB) — Minitel Services Co., formed October 4 to spread a U.S. version of the French Minitel online service, will offer a gateway between the two countries. In France, Minitel has 4 million users and 1,500 online services ranging from the classy to the raunchy.

Perhaps more important, Minitel plans to offer its services here without a sign-up fee, and to give away Minitel terminal emulation software to PC owners. In a prepared statement, MSC President Joseph Mazzeo said this "makes it possible for the four million PC owners in North America who have modems to access American, French and Canadian information, entertainment, shopping, banking and other services virtually by picking up the phone and providing a credit card number." He added, "All the user does is call MSC, obtain the Minitel emulation software, and all services on the system are immediately available." That may prove difficult, however. NEWSBYTES was told by directory assistance operators there is no listing for the Minitel Services Co. in White Plains or anywhere else in the 914 area code. There is a pre-recorded message in the 212 area code, however.

## TRENDS & TECHNOLOGY

### Intel Creates 80386 Chip Glut

Santa Clara, CALIFORNIA, 1988 NOV 19 (NB) — The industry is awash in 80386 chips, 2.4 million of them to be exact, and orders are slowing down. This comes from Intel itself, maker of the 80386 microprocessor, which admits that it made too much of a good thing and will suffer as a result. Intel says this quarter's revenues, due out in December, will fall about 10 percent from figures reported in its third quarter of \$U.S.785 million. Intel denies a report that some customers are returning the 80386 chips, but admits some customers are going through an "inventory correction." Intel Chief Executive Andy Grove said in a prepared statement that he expects the slowdown will end by the second quarter of 1989.

### New Chips Reaching The Market

SAN FRANCISCO 1988 NOV 7 (NB) — New semiconductors have been announced which can

make clones of IBM PS/2 Model 30 computers, store one megabyte of dynamic random access memory (DRAM) in a smaller space, and put all system-level functions of a floppy drive in a single chip.

Intel has announced the industry's first floppy disk controller (FDC) to integrate all system-level functions on a single chip. The 82077 FDC, which supports both 5.25 and 3.5-inch floppy disk drives of up to four megabytes, has a perpendicular recording mode which supports the emerging vertical recording format.

Siemens, Santa Clara, Ca., has introduced a one megabit DRAM chip measuring 47mm<sup>2</sup>. The HYB511000A has an access time of 70 nanoseconds. Full production is underway at Siemens' factory in Regensburg, West Germany. Siemens is among the few companies presently manufacturing one megabit memory devices and has samples of four megabit DRAMS available, with production quantities scheduled for 1989.

Chips & Technologies, San Jose, Ca., has announced a chip that can be used in the creation of IBM PS/2 Model 30 clones, but clones capable of higher performance and faster speed than IBM's original. The company says the 82C230, based on the Intel 80286 microprocessor, will enable Model 30 clones to run at twice the speed of a Model 30 — from 8 to 20 megahertz.

### NEC's Breakthrough On Robot Control

TOKYO, JAPAN 1988 NOV 15 (NB) — Nippon Electric Corp. has successfully developed a prototype control system which allows a space robot to judge its own hand movements by itself. The attached super-fast data processing chip runs at 13.4 mega floating point operations per second. According to NEC's spokesman, the chip will process data at ultra high speed in a manner that mimics the operation of reflex nervous tissues of human beings. The prototype system will control minute movements by itself, even if there is a little time lag for its operation.

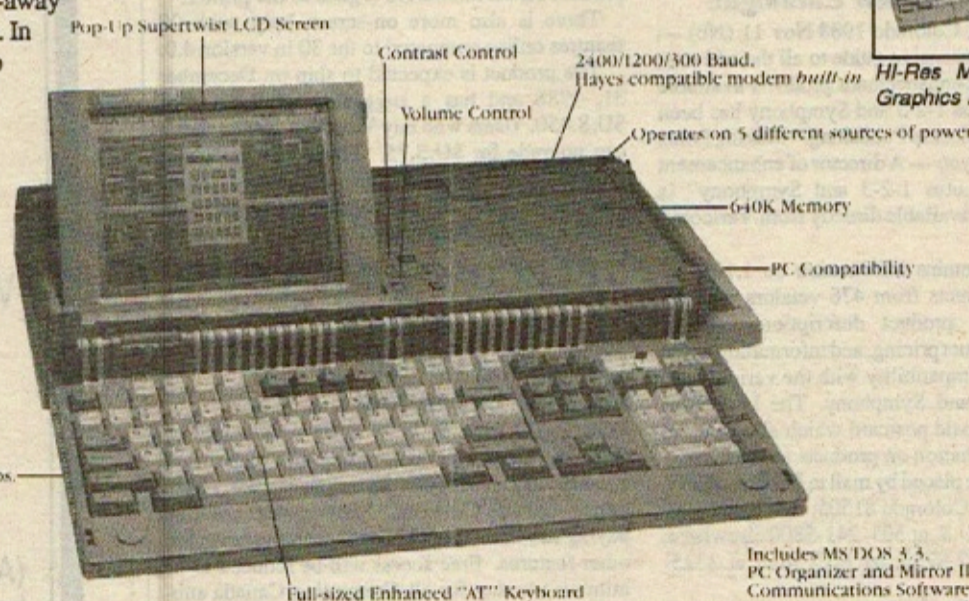
NEC is further aiming to develop an unmanned robot which realizes precise operations with the

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application of artificial intelligence.

### AI To Fix Your Hand Drawing

TOKYO (NB) — Takenaka Corp., one of leading construction companies in Japan, has developed a drawing system with artificial intelligence. The system allows hand drawings without compasses or rulers because AI will display ruled lines that inherently understand the drawer's intention. The company has applied for a patent in Japan, U.S., U.K., West Germany, Korea and China. The system requires hardware which will be priced between 1.5 and 2 million yen or \$U.S.12,000 and \$U.S.16,000, and software which will be priced around 1 million yen or \$U.S.8,000 early next year.

### Judgement On Chip Copyright Issue Between Intel And NEC

TOKYO (NB) — Intel President Andrew Grove has told reporters in Tokyo that the San Jose branch of the California District Court will make a final decision on Intel's lawsuit over NEC's V series chips that allegedly infringe on Intel's copyright. Meanwhile, according to NEC's spokesman, this is news to NEC, which has not received any communication on this matter from Intel. NEC and Intel have been fighting over this copyright issue since December 1984.

### NEC Aggressive With Chips

TOKYO (NB) — NEC Corp., the world's largest semiconductor maker, has announced that it plans to invest about 20 billion yen (\$U.S.160 million) to build a new chip manufacturing facility in Sagami-hara, the suburb of Tokyo. This month, NEC will begin test production of 16 megabit dynamic random access memory chips. No other Japanese makers have yet disclosed plans for a test production line for 16 megabit DRAMs in Japan. NEC is expected to start sample shipment of the large-capacity chip next fall and hopes to begin operation of the facility at the beginning of 1990.

Meanwhile, NEC has been conducting a feasibility study on the manufacture of four megabit DRAM chips in the United States. According to company spokesman Hisashi Saito, NEC will reach a decision on the project sometime around April or May, based on the ongoing study. NEC is the first electronics firm to reveal plans for producing four megabit chips in the U.S.

### No Need For Stenographers?

TOKYO (NB) — Hitachi has developed a voice recognition system based on the technology of neurocomputing and fuzzy logic. The new technology realizes high-precision voice recognition beyond pattern recognition technology.

The voices are recognized as follows. To start, neural networks learn the characteristics of twelve sounds necessary for voice judgement. At the same time, they select out certain sounds using the pattern recognition technology. After that, the fuzzy computer logic decides the priority for correct words. Finally, the system analyzes the words for relationships and decides the context in which they are being used.

The new technology can recognize about 95% of some 3,000 words so far, according to the company. Hitachi promises to apply the technology to a document retrieval system.

### Parallel-Computing Answer

CHICAGO (NB) — University of Illinois researchers at the Center for Supercomputing Research and Development at Champaign-Urbana, led by David Kuck, have announced an innovative architecture called the Cedar System, which could make large-scale parallel processing possible and put Cray-like power, or more, within the reach of every desktop. Kuck said his architecture, which combines hardware switches and software, has been used to link two sets of processors and memory together, and the system could be used with as many as 256 processors at once. "It's a very nice network for interconnecting processors and memories in a way that's very fast," Kuck was quoted as saying. The Cedar system proved its mettle, Kuck continued, by plowing through several complex benchmark programs at speeds close to that of the Cray X-MP, which goes for \$U.S.16 million. The systems used in the test, however, were Alliant minisupercomputers priced at roughly \$U.S.500,000 each.

## UNIX

### NEC Sides With At&T

TOKYO, 1988 22 NOV (NB) — Japan's computer giant NEC has finally expressed its position on the standardization of the Unix operating system — and is going with AT&T.

According to our sources, NEC received a presentation from one of the members of AT&T's alliance, and the company will be registered as a member of Unix International, the AT&T fold which will be established within a month in Tokyo.

Major Japanese companies, such as Fujitsu, Toshiba, and Oki, have already sided with AT&T, but only Hitachi has taken a side with the rival Open Software Foundation.

### Low-End Sun Workstations In Early '89

MOUNTAIN VIEW, CALIFORNIA, 1988 NOV 19 (NB) — Sun Microsystems, in hiatus from a burst of new product introductions earlier this year, will pick up the ball again in early '89 by introducing a line of low-end Unix workstations, so says MacWeek magazine. The weekly publication quotes industry sources as saying Sun will introduce several low-end Unix/DOS workstations to compete with those from Apple and NeXT, Inc. "A general purpose 68030-based workstation should emerge in the first quarter, followed by additions to Sun's 386i line of UNIX/DOS computers," says author Will McClatchy. The report suggests that Sun is seeking distribution channels pioneered by Apple for its coming products and quotes a Sun executive, Barry Folsom, as saying his firm is probably talking with ComputerLand and BusinessLand as retail outlets.

### Another Graphic Unix Interface

PALO ALTO, CALIFORNIA, 1988 NOV 17 (NB) — Hewlett-Packard and Microsoft have announced a new, graphics-based Unix user interface that makes a program running in Unix look like it's an MS-DOS machine running Windows and OS/2. Called Common X, the software consists of specifications for developers. A Microsoft spokesman, at the product introduction in Las Vegas, said users of current Microsoft and IBM products will need only "minimal training" to use Unix software written with Common X.

Observers suggest this new product, however, will only add to the current confusion over a standard Unix operating system. Sun Microsystems already has a graphic interface for Unix machines which are running the AT&T-created Unix. And a new version of Unix is being designed by a consortium called the Open Systems Foundation, and consisting of Digital Equipment, IBM, and Hewlett-Packard, among others.

### Two More Companies Take Sides

TOKYO, JAPAN 1988 NOV 15 (NB) — One after another, major Japanese computer producers have made alliances in the current war whose outcome will decide the future of the Unix operating system. One of the Japanese computer giants, Oki Electric Industry Co., has decided to take AT&T's side. Meanwhile, the biggest software developer, CSK, has decided to back both sides; CSK has applied for membership in the rival Open Software Foundation while remaining friendly with AT&T.

### FBI Closing In On Virus Case

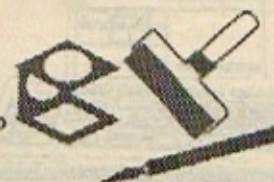
WASHINGTON 1988 NOV 11 (NB) — The FBI says it has found "enough elements" for a full-scale investigation of the spread of a virus through academic and government computers running Berkeley Unix 4.3 and allegedly launched by Cornell University graduate student Robert T. Morris. Morris's father is a computer expert with the super-secret National Security Agency and an expert on the Unix operating system. Morris has met in Washington with his lawyers, but has refused comment to the press. Prosecutors are looking at a 1986 law, never tested, that prohibits intentional unauthorized access to federal computers. That law makes a violation a misdemeanor, punishable by fine and up to a year in jail. The same law escalates the crime to a felony if the illegal access occurs on two or more government computers in different states. FBI Director William Sessions has said that the FBI will decide within two weeks whether criminal violations occurred and whether to bring charges.

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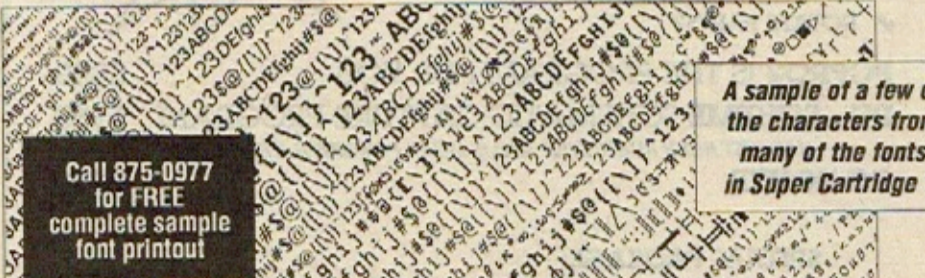
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### Open Software

#### Foundation Expands

BOSTON, MASSACHUSETTS 1988 NOV 11 (NB) — The Open Software Foundation has added new members. OSF is a group of mini-computer makers trying to create a standardized version of the Unix operating system founded on IBM's AIX dialect of Unix. Joining OSF are Computer Consoles Inc., Data General Corp., Informix Software Inc., and Landmark Graphics Corp., all of the U.S., and Hitachi Ltd. of Tokyo. OSF has also announced that it will establish an office in Tokyo, temporarily headed by Yoshiro Ohi, formerly of IBM Japan.

#### IDC Speaker Predicts Moderate Unix Growth

TORONTO 1988 Nov 4 (NB) — Unix systems will account for about four percent of single-user computers shipped in 1992, according to Vicki Brown, director of systems research for International Data Corp. of Framingham, Mass. Speaking at a day-long conference sponsored by IDC Canada Ltd. of Toronto, a subsidiary of the American research firm, Brown said about one percent of single-user systems shipped in 1987 ran Unix. Although Unix will remain a minor slice of the desktop system pie, Brown noted, the figures represent a 39-percent annual growth in Unix sales, considerably higher than in the market as a whole.

Brown also said 76 percent of workstations shipped in 1987 were Unix-based, up from about half the market in 1984. By 1992, she said, IDC expects 83 percent of workstations shipped to run Unix, with only Digital Equipment Corp. still selling workstations with a proprietary operating system.

#### AT&T Pushes Unix Trademark

NEW YORK (NB) — AT&T is expanding its Unix trademark licensing program to cover Unix System V products. AT&T says the move is a result of vendor requests. Under the plan, vendors who base products on System V Release 3.2 and meet AT&T's requirements will be able to use the trademark Unix in the names of the products.

#### Motorola Unix to Run DOS

SCHAUMBURG, IL (NB) — Motorola has bought a way to let Unix computers designed around its 68000 and 88000 microprocessor chips run MS-DOS software. Previous methods for running DOS under Unix required special circuitry which emulated the IBM PC design, with all its limitations. The new package, called XDOS, was written by Hunter Systems Software of Mountain View, Calif. It directly converts programs written in DOS into Unix programs which run as fast as they ran on PCs. Motorola sees this as a way to let MS-DOS software companies enter the Unix market quickly. It's also a way to close Unix system sales to companies which now rely on PCs.

#### Can't Beat Em, So Join 'Em — Microsoft To Get Into Unix

REDMOND, Wa. (NB) — With the Unix operating system increasingly conquering more territory, Microsoft's supremacy in the operating system arena is being threatened, and now Microsoft's chairman admits his company is working on Unix software too. Bill Gates, in an interview with the Reuters Financial News Service, says Microsoft is designing graphics software for Unix systems, the project is code-named "PMX," and the end-result will incorporate elements of Presentation Manager and OS/2 for Unix machines. Gates wasn't saying when these new products will be available, just that they would eventually.

The news adds even more confusion to the already dizzying array of competing Unix versions, other operating system choices, and graphic interfaces now available or coming for computer buyers and users.

#### AT&T Wins Air Force Contract

WASHINGTON (NB) — Despite a difficult time in establishing itself in the computer business, AT&T has won an Air Force contract that guarantees the company's future in computing. An AT&T spokesman called the \$U.S.929 million award the "largest computer contract ever awarded by the federal government." Depending on what options the Air Force exercises, the contract could be worth more than \$U.S.1 billion. The key to the award was AT&T's Unix operating system. The Air Force specified Unix for all bidders. Bidding

was spirited. Among the losers were Zenith Data Systems, Lockheed Missiles & Space Co., Planning Research Corp., Honeywell Federal Systems, and IBM. "Winning this contract firmly establishes AT&T as a leader in the federal computer marketplace," said Warren Corgun, vice president of AT&T's federal systems division.

#### Dbase On DEC VAX

MAYNARD, Mass. (NB) — Digital Equipment Corp. has signed a marketing and development agreement with Ashton-Tate Corp. to put the dBase database program into Digital's VAX/VMS and Ultrix (Unix) environments. "This key agreement will provide a leadership solution that meets the needs of our users," said Digital President Kenneth Olsen. The deal marks the first time dBase has been available on multiuser computers and 32-bit workstations.

Digital has also announced a new file service for personal computer networks. Called PCLAN/Server 2000, an \$U.S.18,000 package that includes a MicroVAX 2000 plus a control console and software to tie 16 PCs together. The servers can be linked into other networks, greatly expanding the size of the system.

#### Sun Micro Splits Stock

MOUNTAIN VIEW, Ca. (NB) — Sun Microsystems, in an attempt to make its stock more attractive to investors, has split it two-for-one. The idea is to attract more small investors, not just the institutional buyers, says Sun's Chief Executive Scott McNealy. The stock split will result in a dividend to current stockholders on December 20.

## COMDEX TRENDS

### A Review Of Comdex Trends

LAS VEGAS, NEVADA, 1988 NOV 19 (NB) — While major American vendors argued about standards (OSF vs. AT&T, MCA vs. EISA) there were some noticeable technology trends to be seen at this year's Fall Comdex. Here's our Newsbytes assessment.

Fax is being rapidly integrated into the computing environment. Not only were there many fax machines on display, but many sported RS-232 ports, and many American computer companies, most notably Wang Labs, made a point of integrating fax images into their systems.

Color has finally arrived. Partly that's because operating systems have been upgraded to handle the demands of color. Apple has abandoned black-and-white to concentrate on the Mac II. IBM's VGA standard can handle real color photographs. Atari and Commodore continue as factors because developers have many color applications on the ST and Amiga machines. There were color scanners and color printers of all types on display. And prices will be coming down.

The "Four Tigers" — Singapore, Taiwan, Hong Kong and Korea — have raised the stakes in worldwide computing by offering innovation as well as low prices. The GUI fax-answering machine was the surprise of the show, and if the machine's Taiwanese maker can deliver on its promises, a \$U.S.1,200 machine which separates fax and voice calls by next spring, the Japanese will have plenty to worry about.

The "memory shortage" will soon turn into a memory glut, but it's becoming clear how businesses will use that extra memory. Rather than passing more messages between computers, we'll see more complex messages, color pictures, stereo sound, and fax.

Finally, Comdex itself. Despite growing complaints that it's too big and lacks focus, increasing numbers of people keep coming. Final attendance was estimated at 110,000 (this in a city where there are only 60,000 hotel rooms). Corporate buyers and MIS directors now dominate convention sessions. And it's clear The Interface Group is hearing the complaints, with plans to move Macintosh developers into a separate MacDex. No one can "see it all" (Interface's phrase) anymore, and few try. Every attendee we talked to had a short, specific list of booths and topics laid out. And if Comdex does reflect the state of the industry, its boom just keeps on booming.

*For a more complete overview, see the next section on Comdex.*

# Comdex Show Report

## Show Overview — The Computer Mob Descends On Las Vegas

LAS VEGAS, NEVADA, 1988 NOV 14 (NB) — Comdex is very big. With eight different exhibit halls, 100,000 visitors, and 2,500 reporters, it may be the biggest event in the history of American computing. Whether anyone will be able to make sense of it all is another story. NEWSBYTES has heard tales of people staying 100 miles away and commuting in to see this show. Hotels were booked solid starting Saturday for a show that didn't open until Monday morning.

The trends? The Macintosh is stronger here than at any previous Comdex, which is saying something considering the large number of Mac-specific shows available, and the fact Apple is making no news here. (They are, however, making rumors — the latest has the long-awaited Macintosh laptop being announced as early as January.) Another trend is confusion, between graphic interfaces, between versions of Unix, and between versions of the IBM standard. IBM's Terry Lautenbach told a keynote panel audience the company is committed to its MCA bus, despite having announced a new AT-clone. President Rod Canion of Compaq, on the same panel, predicted his EISA bus design will carry the day. And dozens of exhibitors from India, Taiwan, China and other points were offering AT-compatible machines for sale at prices well under \$U.S.1,000 — including monitors and software.

Comdex has evolved from a major press event to a giant campmeeting, where developers, reporters, and consultants in widely disparate fields can get together and share drinks and ideas. It's no longer a question of whether you should attend, or whether Comdex is worth it. It's just become a necessary hassle of doing business, like all-night programming sessions and user group meetings. If you're serious about this business, you're here. You may have dragged yourself in kicking and screaming, but you're here.

## Panelists Emphasize Graphics, Networks, Lack of Standards

LAS VEGAS, NEVADA, 1988 NOV 14 (NB) — The six panelists at Comdex's keynote panel this morning agreed on the need for standards in the computer industry. What they could not agree on was, which standards? Rod Canion, president and chief executive of Compaq Computer Corp. in Houston, Texas, touted the Extended Industry Standard Architecture (EISA) which his company spearheaded earlier this fall. He said compatibility with installed PCs is essential. But Terry Lautenbach, senior vice-president and general manager of IBM United States in Purchase, N.Y., defended his company's move to the non-compatible Micro Channel Architecture, saying the old AT bus "as good as it was, had simply run out of gas."

Lautenbach made no specific reply to the comments of Robert Kavner, president of the Data Systems Group of AT&T Co. in Morristown, N.J. Kavner applauded the Open Software Foundation — of which IBM was a founding member — for working toward a Unix standard. But he added, "I wish that they would listen to the customers who are using Unix today." End-users want Unix System V, the version developed by AT&T, rather than the OSF Unix standard, expected to be based on IBM's AIX implementation of Unix.

The panelists found common ground, however, in the need to make personal computers easier to use. "We say we've come such a long way," said Philippe Kahn, president of Borland International, Inc., in Scotts Valley, Calif. "Well, I think we haven't come a long way, because it's still very difficult for professional to find solutions that meet their needs, because they have to become computer-literate."

Kahn emphasized the importance of linking personal computers with larger systems for cooperative processing. And William Gates, chairman of Microsoft Corp. in Redmond, Wash., named networking and graphical user interfaces as the two key new directions in the industry at present. Rick Inatome, president and chief executive of

Inatome Computer Centers, Inc. in Troy, Mich., added a call for new distribution relationships in the industry. "The most powerful insight was not necessarily the one that made the most money," he said.

## Software Horizons:

### Groupware, Standards Fights

LAS VEGAS, NEVADA, 1988 NOV 15 (NB) — The Comdex Software Summit, hosted by Esther Dyson, editor of the Release 1.0 newsletter, turned on the subject of groupware, software which lets people share their work, and the data behind it, in computers as they do in real life.

Fred Gibbons, president of Software Publishing Corp., Mountain View, Calif., doesn't think the groupware concept will ever fly. "I think groupware will go the way of the commune. Don't confuse communication with a group grope." Dyson, of course, disagreed. "Whatever the new hardware platform is, it has a network in it. Groupware is the underlying model that will infect applications. No one will buy a groupware. They'll buy applications that manage processes done by groups."

William Campbell, president of Claris, the Apple software spin-off, complained that, in their search for power, companies have forgotten the user. "We're making more elite products for power users, while fewer people have that capability to be power users." Ease-of-use and realistic pricing are more important than nifty new features, he said.

There was a lot of talk about a man and company who aren't here, namely Steve Jobs and his NeXT machine. The corporate micro managers in the 500-person audience seemed to reject Jobs' dream, and had few kind words for Apple because its products don't fit into the "installed base." Still, they expressed great interest in hypertext, hypermedia, and other techniques which Apple has pioneered, and NeXT has incorporated.

Morton Rosenthal, chairman of Corporate Software, Westwood, Mass., was their champion on the panel and strongly endorsed CD-ROM technology. "The media can make a tremendous difference. You can use a database of magazine articles on CD-ROM all the time, where you may never use that year's worth of magazines piled in the corner."

Fernand Sarrat, general manager for new business opportunities at IBM in Milford, Conn., was buoyed by a show of hands showing twice as many software developers creating new applications for OS/2 or MS-DOS than either the Apple Macintosh or Unix. He said IBM will support those developers. "IBM will source new products from developers. The emphasis will be on getting to market cooperatively." On the subject of NeXT, he said, "We will push NeXT Step (the Unix interface for NeXT which IBM has licensed) in niches, but momentum is with OS/2."

Barry Folsom, a vice president at Sun Microsystems, Mountain View, Calif., represented Unix on the panel. "Just say no to OS/2," he quipped. "My view of OS/2 is that it's yesterday's software, tomorrow. Everything OS/2 promises to do I've been doing for 4-5 years on my workstation." To which Sarrat shot back, "For \$U.S.50,000." It was a good exchange, but as in the Presidential debates there was more heat in it than light.

## Panel Pick Hot Software For 1989

LAS VEGAS, NEVADA, 1988 NOV 15 (NB) — Ask five different people what will be the 10 hottest software products of 1989, and you get five different lists. But the lists overlap in places. At a Comdex panel on the software market that has become an annual event, five industry experts presented their lists. Several products and product categories got multiple mentions.

Word processors to run under Microsoft Corp.'s Windows operating environment will be hot in 1989, according to Tim Bajarin, executive vice-president of Creative Strategies Research International in San Jose, Calif. He mentioned Ami, from

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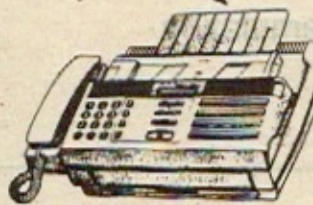
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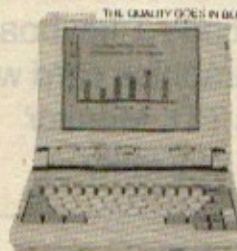
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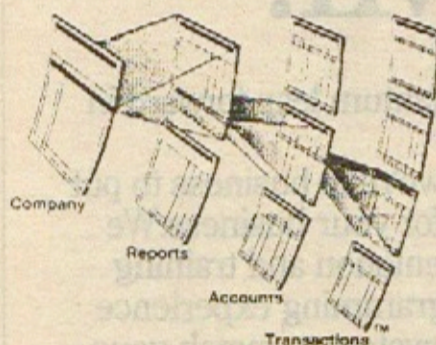
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## COMDEX CONTINUED

Samna of Atlanta, which is due to ship by year-end, and Opus, a Windows word processor Microsoft is expected to announce soon. Michael Miller, executive editor of InfoWorld, said Windows applications in general, including Microsoft's Excel spreadsheet, will be hot in 1989. Jeffrey Tarter, editor and publisher of Sofletter in Cambridge, Mass., also saw Ami as a product to watch.

There was no surprise in the repeated mentions of Lotus 1-2-3 Release 3, dBase IV and the OS/2 Presentation Manager as important software for 1989.

Wingz, the presentation spreadsheet program for Apple's Macintosh computer from Informix Software of Lenexa, Kansas, made Bajarin's list as well as that of Robert Orbach, director of computer sales for 47th Street Computer. Miller and David Scott, of Corporate Software, Inc., in Westwood, Mass., both mentioned Notes, an as-yet-unreleased workgroup application from Lotus Development Corp. Bajarin also mentioned workgroup applications as an important software area for the coming year. Another frequently mentioned software category was presentation programs such as IBM's PC Storyboard II.

### Foreign Firms Steal Some Of The New Technology Thunder

LAS VEGAS, NEVADA, 1988 NOV 15 (NB) — At one time you could rely on foreign firms to offer me-too products at lower prices. No more. Now it's Japanese firms which set the technology pace in peripherals, while American firms fight to catch up.

It was no surprise to see a big crowd at the Sony booth, where orders were being taken for a line of erasable optical drives. The CDs are encased in jackets which look like Macintosh floppies on steroids, and while the drive's access time of 90 milliseconds compares unfavorably with the speed of today's hard disks, it's fast enough for many applications. The units are shipping now from Tokyo, and you can expect to see products with them on the Comdex show floor next fall.

In the Canon booth, they're breaking new grounds on price-performance with the BJ-130 bubble-jet printer. The printer uses a cartridge and a "bubble" technology to give you laser printer quality at a dot matrix price, at a speed of 220 characters per second. Canon is hustling to find drivers which will let the PGA emulate the laser printers which are popular in the U.S. A Canon spokesman acknowledged the only printer the BJ-130 can emulate today is the IBM Proprinter, but claimed a company called Metro Software in New Jersey has an emulator for the H-P Laserjet ready to go.

### Microsoft To Release Windows Word 2nd Q 1989

LAS VEGAS, NEVADA, 1988 NOV 14 (NB) — Microsoft Corporation has announced that the definite version of Windows Word, the word processor that will run under MS Windows as well as Presentation Manager, will be released in the second quarter of next year.

Jeff Raikes, general manager of Microsoft's Office Business Unit, talking to NEWSBYTES, added, "Windows Word will offer the same type of interface as Excel and naturally be different than Word 5.0 which is a character based word processor. Windows Word will have the same functionality as Mac Word 4.0, which is the latest version of the word processor available under the Macintosh operating environment. Since Microsoft supports a standard user interface, Windows Word will have to follow."

### Apple Shows It IS The Mainstream

LAS VEGAS, NEVADA, 1988 NOV 16 (NB) — For the second year in a row, Apple took a room off the main show floor to meet its friends and confound its enemies. "What's the message this year?" an Apple person asked as we entered. "An extension of the message from last year."

That message is, in two words, Macintosh II. Every single demonstration in the Apple booth this year was running off a II. There were separate desks for Apple to meet VARs competing against IBM in business markets, Unix in technical markets, the Atari and Amiga in multi-media markets,

and for desktop publishing. Only two software developers were favored with space in this booth. Alphagraphics displayed its PrintShop of the Future, which combines desktop publishing functions with an ordering system and accounting. It's the foundation for a line of print shops the company is now building around the country. "We can print on any PostScript or QuickDraw printer, even send out files via modem or fax at 300 dpi," said Director Ethan Benese.

### Ogivar Introduces 386SX

LAS VEGAS, NEVADA, 1988 NOV 16 (NB) — Ogivar Technologies Inc. of Montreal, one of the first companies to release an 80386 computer, is again among the first with a new chip. At Comdex, the company showed its System SX386, based on Intel's 80386SX processor. Louis Belmont, vice-president of international sales, said the SX386 is still awaiting approval by the Federal Communications Commission, and should be available in the United States early next year. The system may be on the market sooner in Canada.

### Faster, Smaller 386 Motherboards

LAS VEGAS, NEVADA, 1988 NOV 16 (NB) — Motherboards using the 80386 processor are plentiful at Comdex this year, including a few built on the new 386SX version of the chip, and a couple that push the 386's speed limit.

Mylex Corp. is one company stretching the speed barrier. Its MX386 board is designed to run at 25 to 33 megahertz. The newly introduced board will sell for "under \$U.S.4,000," according to sales engineer Connie Austin. Wave Mate Inc. of San Francisco, meanwhile, claims to have the world's fastest 25-megahertz 386 motherboard. By running with zero wait states all the time, Wave Mate claims, the Bullet-386AT turns in performance equivalent to an IBM AT running at 42 MHz. This version sells for \$U.S.2,748 with four megabytes of RAM. Wave-Mate also has 16-megahertz and 20-megahertz 386 boards.

Ordinary 25-megahertz 386 boards at Comdex are priced around \$U.S.1,500 for the most part, typically with up to one megabyte of memory as a standard feature.

Matech Computer Systems of Cleveland, Ohio, is selling processor boards the size of AT expansion cards. An 80286 board sells for \$U.S.749, an 80386SX board — one of the few on display at the show — for \$U.S.995. Boards using the standard 386 chips range up to \$U.S.2,395.

### Microsoft Strategy Announcement

LAS VEGAS, NEVADA, 1988 NOV 14 (NB) — Microsoft executives, led by Chairman Bill Gates, have briefed the press at a luncheon held in the Riviera penthouse suites. The primary purpose of the meeting was to disclose the key features of Microsoft's new business plan. The plan began with the recent division of Microsoft's Applications Division into seven Business Units. Each unit is responsible for a group of related software applications.

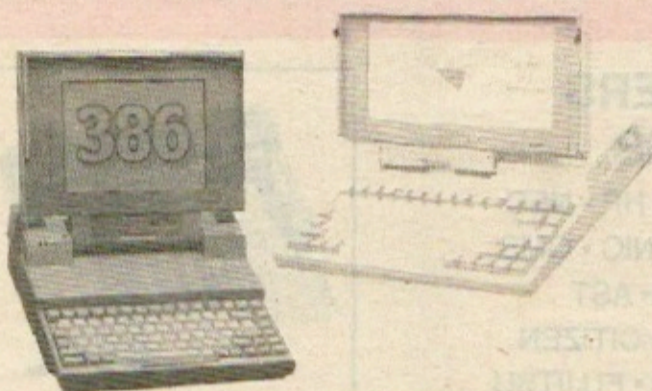
The key element, revealed for the first time today, is the use of a common core, or engine, for each of the company's many software products. This engine will allow each application to be simultaneously released, for all three of the operating system environments which Microsoft has chosen to target, with a minimum of development effort. Only approximately 20% of the code will need to be different for the respective environments.

The three object environments are: OS/2's Presentation Manager, DOS Windows and derivatives—such as New Wave from Hewlett-Packard—and the Apple Macintosh. Unix is not presently under consideration due to a lack of sufficient commonality in the underlying binary code used by various hardware platforms.

Product demonstrations were hosted by Vice president Mike Maples who introduced general managers from two of the seven new business units which comprise the Microsoft Application Division. Jeff Raikes, head of the office business unit, demonstrated Microsoft Word 5.0 for the gathering which included many of the industry's most influential analysts and journalists.

# Some Things To Consider When Buying A Laptop Computer

A Buyers Guide to LAPTOP COMPUTERS



Personal Computers are becoming commonplace and even essential in many people's lives. With this comes the desire to have access to a PC when away from office, or home. Some observers feel laptops will be a major growth area in the next few years as many more people discover the benefits of life on the road with computers.

## What are the Latest Trends in Laptops?

Laptop PC compatible computers are the logical miniaturization of the portable (suitcase sized) computer, made possible by the development of improved flat screen displays, which are far more compact and use much less power than CRTs. The popularity of these machines is growing rapidly among business and sales people who travel. Laptops are currently pricey, but you can expect to see many new makes and models entering the market, which should result in more features and lower prices.

## I've Heard Laptops are Hard to Read. What is Happening With Screens?

While the early LCD displays were difficult to read, all LCD displays now have super twist technology, with various colors and some with back lighting. Some supertwist screens still lack contrast and clarity. Gas plasma and electro-luminescent displays offer good legibility, but are generally more expensive and place a heavier demand on battery endurance. Some flat screen displays have EGA resolution. LCD screens up until recently could only display from 2 to 8 gray-scale representations of colors. Some recently announced models have up to 16 levels of gray. Only some LCDs display characters in bold. Many laptop screens have a very different aspect ratio (width to height) than CRTs, which distorts graphics (circles become ovals). The actual size of the screen is also an issue you should pay attention to. Smaller screens require much more scrolling in order to access your information, but bigger screens come at a cost of both dollars and battery life.

## What about Upgrading Laptops?

The desktop PC has become a somewhat generic product, upgradeable with standard modular parts available from third party manufacturers. Laptops are far less standard. Some Desktops offer no expansion slots, others provide one or two and those are usually proprietary, making the owner a captive customer for upgrading.

## What Do I Look For In A Keyboard Layout?

Desktop keyboard layouts have become fairly standard, but laptop keyboards vary greatly, some are very poor and may make it difficult for you to adapt from keying on your desktop. Some laptops provide for connection of your favorite desktop keyboard when you are at home base, but this isn't very practical when you are on the road. If you do a lot of number crunching, the numeric keypad layout is crucial. Many of the keyboards available have the numbers written on the sides of letter keys and you have to access them through a Num Lock switch. This can be very awkward. Better layouts are emerging with separate numeric keypads. Notable here are the keyboards from NEC.

## What Kinds of Optional Equipment Should I Consider?

A backlit LCD, hard disk, and internal modem,

may be extra cost options. An external floppy drive, and expansion chassis are available for some machines. An internal 2400 baud modem is sometimes an option. Very small external modems are now available. Hard disks are optional on many models.

## Where Can We Expect Laptops To Go In The Near Future?

The logical target for manufacturers is to maximize non-volatile data storage, display clarity and monochrome representation of colors, while reducing size, weight, and battery power consumption. Solutions would seem to be:

1. High density diskette drives (1.44Mb/720Kb compatible).
2. Built in Software: DOS, word processing and a wide choice of other software in ROM.
3. Large area, high resolution, contrasty, non-backlit LCDs.
4. Non-volatile (battery refreshed) RAM, or bubble memory.

## How Do I Go About Choosing A Laptop?

Being less upgradeable than a desktop, choice of a laptop requires a more careful analysis of your present and future needs. Choice of a laptop is a compromise, weighing features against cost. Weights range from 4.4 lbs for the NEC Ultralight, to some 20 lbs. for full featured machines with hard disks, gas plasma displays and heavy batteries. Some units offer an extension chassis, which will add significantly to weight and bulk. Many laptops offer a considerable list of optional equipment, which will affect total cost of your purchase, and set the limits of future upgrading of your system. Most laptops have a socket for a math co-processor.

## What Should My New Laptop Feel Like?

Make sure you are comfortable with the keyboard layout and feel. Select a machine with a screen you can read easily. Your anticipated applications will determine the amount of memory and disk storage you will need. Note that some non-backlit LCD displays are very readable. Displays designed for backlighting are difficult to read, when the backlight is switched off to conserve battery power. Laptops cost a lot more than similarly equipped desktop PCs but the many new models entering the market will undoubtedly put downward pressure on prices. Below is a sampler of some of the laptops available in the Vancouver area.

## XT and XT Turbo Compatibles

**Amstrad PPC640** - This is an unusual laptop, built around a good, full size 101 key keyboard. Instead of a battery pack, it uses 10 C batteries. At 13 lbs (with batteries) it is a bit heavy and awkward to use on your lap, but the full size keyboard makes up for this inconvenience. The 9" blue on green, supertwist LCD screen is not backlit and is not as readable as some. This reasonably priced machine has a built in 2400 baud modem. It also operates from a variety of power sources.

**Datavue Spark** - There are 5 color palettes available on the LCD screen. Backlighting is an extra cost option, as is the battery pack. The keyboard on this laptop is a little noisy and uses a combination of function and cursor keys using 2 hands for



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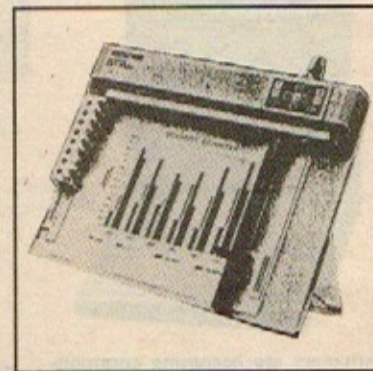
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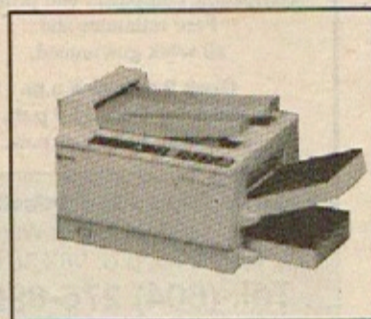
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Home, End, Page Up or Page Down. There is a port for an external 5 1/4" drive. This machine may be a good price-features-size compromise.

**Kaypro 2000 Plus** - This moderately priced computer has a keyboard with good layout and feel. The backlit, EGA compatible LCD display is one of the largest and most readable, but has flicker at some settings. A CRT port is included. The computer comes with GW Basic and Wordstar 2000 with WordFinder thesaurus, and a 1200 baud modem.

**NEC UltraLite** - This amazing laptop weighs only 4.4 lbs. Its V-30 processor runs at 9.83MHz. It comes with 640K of RAM and a 1 or 2Mb, RAM disk, which uses a separate battery to retain data when the computer is switched off. The full size keyboard provides quiet tactile feedback. DOS 3.3, LapLink and MS-DOS Manager are in ROM. There is a built in 2400 baud modem, a serial port and ROM card drive. Business card sized ROM cards can contain up to 1Mb. There is a good backlit display. The rechargeable lithium battery lasts about 2 hours. It is removed for recharging in a separate 1.2 lb recharger. An external 3.5" diskette drive that can read, write and format in 1.44Mb or 720Kb, is optional.

**NEC MultiSpeed EL** - The EL (like the HD which follows) uses the fast NEC V-30 microprocessor. It has a full size keyboard with a nice feel and pleasant key click. Location of the Enter key is slightly awkward. The separate cursor/numeric keypad is located above the QWERTY keys. The 10.5" backlit, supertwist LCD screen is bright blue and easily readable.

**NEC MultiSpeed HD** - This computer comes with 512k of ROM which contains Notepad, Filer, Dialer, Outliner, Setup, and Telecom software. 512k dynamic and 128k static (battery backed) RAM are included. The excellent display is backlit. There is a separate numeric/cursor keypad, keyboard layout and key action are very good. This model does not support a math co-processor.

**Sharp PC4521** - The full sized keyboard (with separate numeric keypad) is noisy and has a stiff feel. The backlit LCD has limited contrast. However, the Sharp has many features and is not expensive.

**Tandy 1400LT** - While rather large and heavy, this computer offers many features for a modest price. It has a good backlit LCD display, and large keyboard. There are ports for a desktop keyboard and external floppy drive.

**Toshiba T1000** - This inexpensive laptop comes with MS-DOS 2.11 in ROM. The display is clear and has good contrast, with a resolution of 640 x 200. The keyboard has a good feel and documentation is good.

**Toshiba T1200** - This is a very small laptop with a 20Mb hard disk. It offers many features, including a removeable battery and charger and good keyboard. The screen is not backlit.

### 80286 Laptops

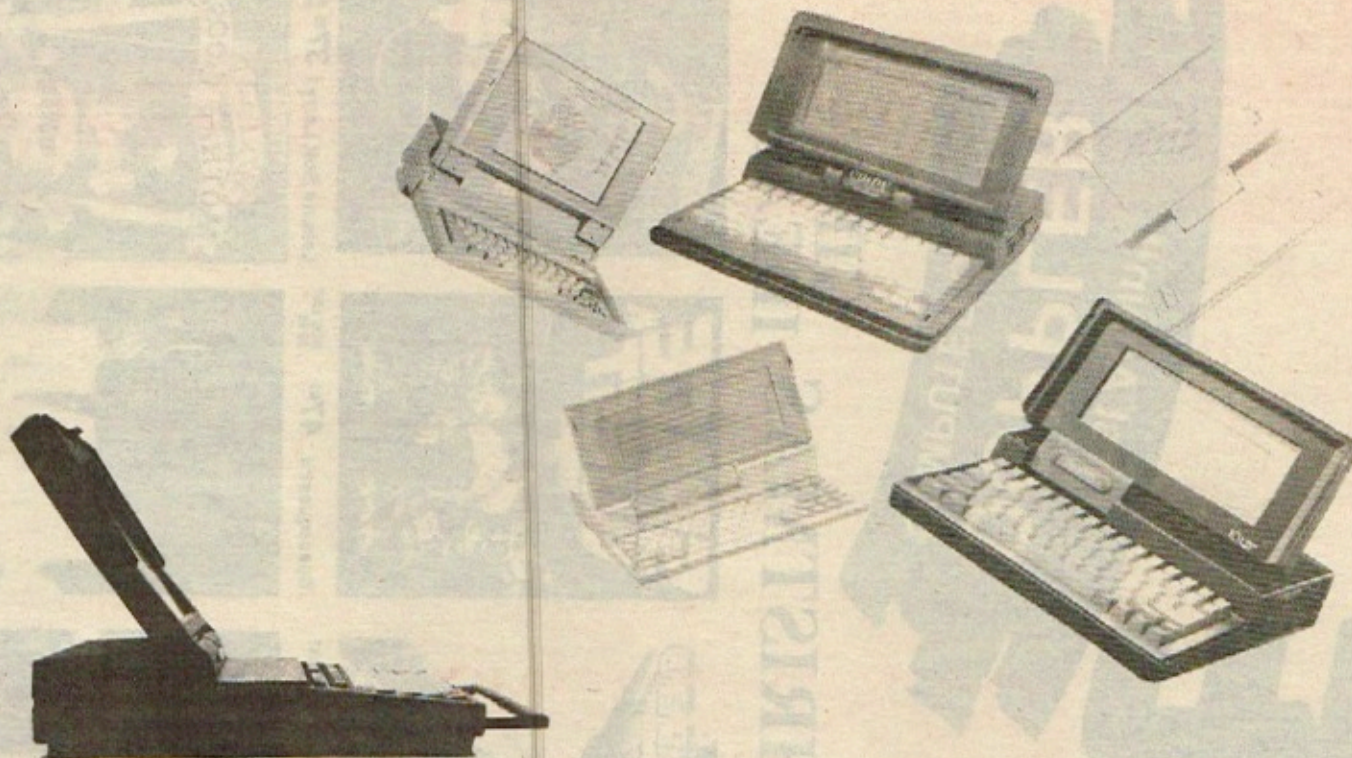
**Mitsubishi MP 286L** - This laptop has a highly legible 11" LCD display, but only CGA resolution. Keyboard arrangement could be better but feel and response are good. The price is attractive for this capable machine.

**Toshiba T3200** - This 12 Mhz, 19 lb. computer has 2 IBM PC compatible expansion slots, EGA compatible display, and ample disk storage. The 1Mb RAM can be increased to 4Mb without using the expansion slots. The T3200 is a powerful computer and is reasonably priced. 80386 Laptops

**Toshiba 5100** - The very legible gas plasma display on this machine has brightness and contrast controls and a hood to reduce reflections. The keyboard is responsive. With extensive options available, software and good manuals are included. A very full featured machine.

**Zenith TurboPort 386** - This computer has an outstanding, page white LCD display, but the detachable keyboard could be better. The TurboPort has many features if you are looking for a powerful machine.

The above are just a sampling of the more popular laptop PCs. There are many more, including new models just being released. The table which follows surveys these and others.



## Survey of Laptops Available in The Lower Mainland Market

### XT & XT TURBO CLASS COMPUTERS

Manufacturer & Model	Type of CPU	Speed MHz	Basic RAM	Maximum RAM	Disk Drives	Battery Life	Weight lbs	Size: Inches (hXwXd)	Suggested List Price
Amstrad PPC 640	V-30	8	512k	640k	2 x 720k		13	4 X 17.8 X 9	\$2095
Bondwell 8 Turbo	80C88	8	640k		2 x 720k		13.2	3.5 X 13.6 X 12	\$2739
Bondwell BT - 20	80C88	8	640k		1 x 720k, 20 Mb		13.2	3.5 X 13.6 X 12	\$3595
Datavue Spark	V-20	4.77/9.54	348k	640k	1or2 x 720k	4-6hr	10	2.5 X 13.2 X 12	\$2749
Datavue Snap 1+1	80C88	4.77/9.54	640k	1.25M	2x720k	2hr	9	3.2 X 13 X 13	\$3695
Datavue Snap 1+1 20	80C88	4.77/9.54	640k	1.25M	720k & 20Mb	2hr	9	3.2 X 13 X 13	\$5495
Kaypro 2000 Plus	V-20	4.77/8	640k		2 x 720k		16	3.5 X 13 X 11.5	\$3520
NEC Ultralight (1 Mb)	V-30	9.83	1 Mb		1.44M ext.	2hr	4.4	1.4 X 11.8 X 8.3	\$4799
NEC Ultralight (2 Mb)	V-30	9.83	2Mb		1.44M ext.	2hr	4.4	1.4 X 11.8 X 8.3	\$5899
NEC MultiSpeed EL	V-30	4.77/9.54	640k		2 x 720k	4-6hr	11.5	3.1 X 13.6 X 12.4	\$3275
NEC MultiSpeed HD	V-30	4.77/9.54	640k		720k + 20Mb	1-4hr	14.3	3.6 X 13.7 X 12.5	\$5166
Sanyo 16LT	80C88	8/4.77	640k		2 x 720k	6hr	7.9	2.4 XZ 12.6 X 11.4	\$2099
Sharp PC 4521	V-30	7.16	640k	1.6Mb	720k & 20Mb		13	3 X 12.2 X 13.7	\$4495
SupersPort Model 2	80C88	4.77/8	640k	1.64	2 x 720k		9.7	3 X 12.2 X 12.2	\$3599
SupersPort Model 20	80C88	4.77/8	640k	1.64	720k & 20 Mb		9.7	3 X 12.2 X 12.2	\$5299
Tandy 1400 LT	V-20	7.16	768k	768k	2 x 720k or	4hr	13.5	3.5 X 14.5 X 12.6	\$1699
Tandy 1400 LT 20 Mb	V-20	7.16	768k	768k	720k & 20M		13.5	3.5 X 14.5 X 12.6	\$2495
Toshiba T1000	80C88	4.77	512k	1.28M	720k	2-4hr	6.4	2 X 12.2 X 11	\$1899
Toshiba T1200	80C86	4.77/9.5	1Mb	6Mb	2 x 720k or	7hr	11	2.6 X 12.2 X 12	\$4299
Toshiba T1200 20 Mb	80C86	4.77/9.5	1Mb	6Mb	720k + 20Mb		11	2.6 X 12.2 X 12	\$5999

### 286 CLASS LAPTOPS

Manufacturer & Model	Type of CPU	Speed MHz	Basic RAM	Maximum RAM	Disk Drives	Battery Life	Weight lbs	Size: Inches (hXwXd)	Suggested List Price
Bondwell B300	80286	10			1.44 + 20 M		15	3.5 X 13.6 X 12	\$5429
Compaq SLT 286 M.20	80C286	12	640k	3.6Mb	1.44 + 20 Mb	3hr	14	4.2 X 13.5 X 8.5	\$7999
Compaq SLT 286 M.40	80C286	12	640k	3.6Mb	1.44 + 40 Mb	3hr	14	4.2 X 13.5 X 8.5	\$8899
Mitsubishi MP286L	80286	8/12	640k	2.6Mb	2 x 1.44Mb		15.9	3.5 X 12.3 X 14.2	\$4895
Mitsubishi MP286L- 20	80286	8/12	640k	2.6Mb	1.44 + 20Mb		15.9	3.5 X 12.3 X 14.2	\$6095
NEC ProSpeed 286	80286	16	1Mb	5Mb	720k/1.44M & 20 Mb		14	3.5 XZ 12.9 X 14.9	\$7699
NEC ProSpeed 286	80286	16	1Mb	5Mb	40 Mb		14	3.5 XZ 12.9 X 14.9	\$8599
Toshiba T1600	80C286	12	1Mb	5Mb	1.44 + 20Mb	5hr	11.4	2.7 X 12.2 X 12.5	\$6999
Toshiba T3200	80286	6/12	1Mb	4Mb	720k + 40Mb		19	3.9 X 14.6 X 15.6	\$9499
Zenith SuperSport	80286	6/12	1Mb	2Mb	720k/1.44M		14.6	3 X 12.2 X 12.2	\$7699
Zenith SupersPort 286	80C286	6/12	1Mb	2Mb	+20Mb		14.6	3 X 12.2 X 12.2	\$8599

### 386 CLASS LAPTOPS

Manufacturer & Model	Type of CPU	Speed MHz	Basic RAM	Maximum RAM	Disk Drives	Battery Life	Weight lbs	Size: Inches (hXwXd)	Suggested List Price
NEC ProSpeed 386	80386	16	2Mb	10Mb	1.44 & 40 Mb	2-3hr	17.6	3.9 X 15.9 X 13.6	\$11,499
NEC ProSpeed 386	80386	16	2Mb	10Mb	1.44 & 100Mb	2-3hr	17.6	3.9 X 15.9 X 13.6	\$12,799
Toshiba T5100	80386	8/16	2Mb	4Mb	1.44 + 40Mb		14.7	3.7 X 14.2 X 12.4	\$11,699
Toshiba T5200	80386	20	2Mb	8Mb	1.44 + 100M	.5 to 9hr	19.8	3.8 X 14.3 X 15.3	\$16,999
Zenith TurboPort 386	80386	6/12	2Mb	3Mb	1.44 + 40Mb	2 - 3hr	14.7	4.75 X 13.2 X 14.7	\$12,399
TurboSport 386+ modem	80386	6/12	2Mb	3Mb	with 2400 B modem	2 - 3hr	14.7	4.75 X 13.2 X 14.7	\$12,999

#### A Note About Prices:

The prices above were obtained in a survey of retailers in the city. We received a range of suggested retail pricing from these vendors and even when the S.R.P. was constant, the selling price varied considerably from vendor to vendor. Dis-

counts range from 0 to 50% of the suggested price, so use the prices in this table with a considerable quantity of salt. The most common discount figure seems to be about 30% off list. Get your own pricing on the units as it will vary over time as well.

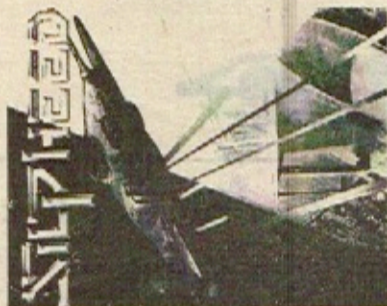
Look for the features you need, and then start shopping for price and the level of support that you will require. In some cases it will be more cost effective to pay more if the vendor is knowledgeable and willing to provide after sales support to you.

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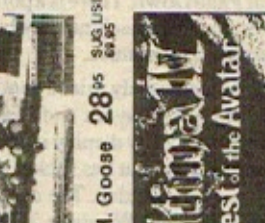
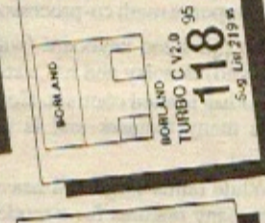
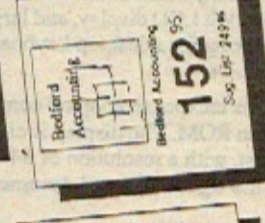
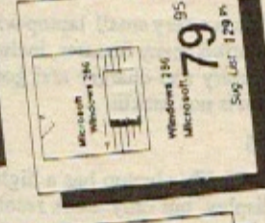
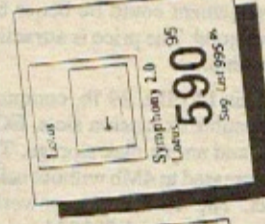
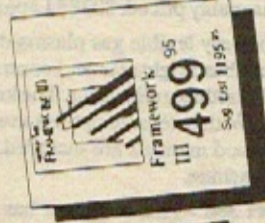
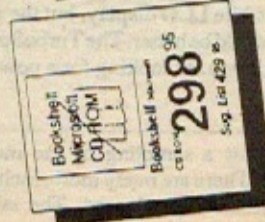
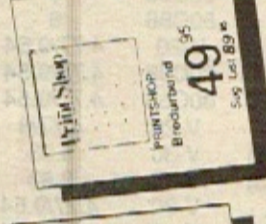
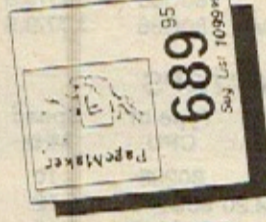
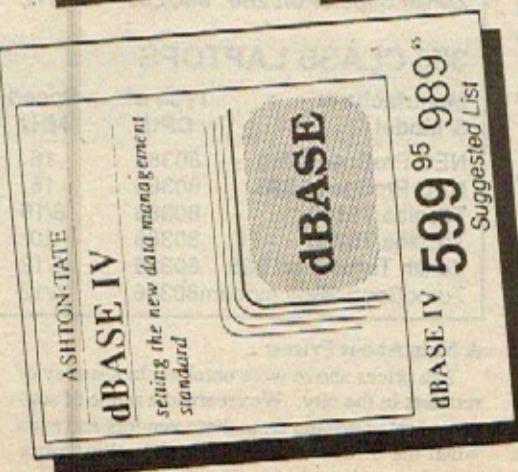
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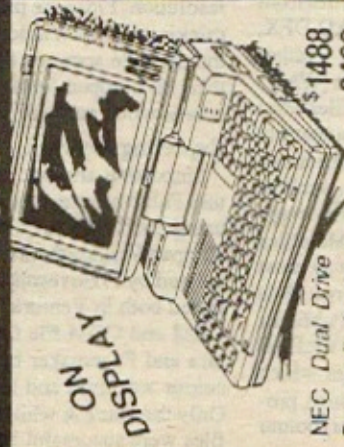


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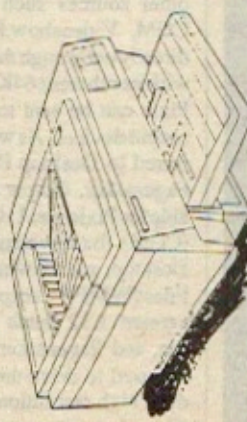
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#### PC SOFTWARE REVIEW

## The Maximizer Helps You Maximize Sales

**PRODUCT:** The Maximizer Release 1.6  
**PUBLISHER:** Pinetree Software  
**SYSTEM REQUIREMENTS:** IBM PC or com-  
patible, 640 K, two 720 k disks or one 360 k  
disk and a hard drive, EGA  
recommended. Parallel port & printer required.  
System clock/calendar required for some  
reports.  
**PRICE:** C\$195 Single User, LAN versions  
are available for 3, 6 and 20 or more users.

Like PackRat (reviewed in the October issue of  
The Computer Paper) the Maximizer is another  
pre-structured data base. This one is designed to  
keep track of clients and contacts and to store  
notes, schedules, letters, and telephone listings,  
etc. to help the executive or sales professional to  
increase his productivity and competitiveness. User  
friendly interface, fast access to data and flexibil-  
ity are what makes this program attractive.

An Install program and Installation and Techni-  
cal Reference booklet make installation easy. The  
User's Guide and the Quick Reference card pro-  
vide clear instructions and are well illustrated.

The Maximizer is a B-Trieve type data base,  
which provides rapid access to data, and uses a  
windowing type environment. There are three  
types of windows (menus, lists and forms) which  
overlay one another as they are opened. Selections  
are made by cursor, page up and down keys, or  
entering the first letter of a menu choice. A mouse  
is not used. The number of records is only limited  
by your disk space.

#### Functions of The Maximizer

1. Client/Contact Records contain many fields,  
including 'Salutation' for mail merge, four phone  
numbers, last and next contact dates, and notes of  
unlimited length. A record can be designated  
'Private', when you want to exclude other LAN  
users from it.

2. Letters/Selection provides an editor for writ-

ing letters, a mail merge facility, and printing of  
letters, labels and envelopes (using Client/Contact  
record data).

3. Personal Records are used for scheduling  
your activities and maintaining notes and memos.

4. Hotlist/Today consolidates, displays and prints  
scheduled activities and appointments for the day  
week or month.

5. Dial-Up/Quick Access can use a directory  
you have selected from Client/Contact records,  
using auto dial, if you have a modem. You can  
enter notes while on the phone and call duration is  
logged. Completed calls can be marked on the list

### *The Maximizer will typically be used by sales people...*

with an asterisk.

6. Payment Calculations enable you to calcu-  
late mortgages and loans and display payment  
schedules.

7. Utilities enable you to set up passwords and  
system defaults etc.

#### Useful for Sales Executives

The Maximizer will typically be used by sales  
people, who are not necessarily computer oriented  
and face frequent phone calls and other distrac-  
tions, while using a program. The program is  
intuitive and thus easily learned. The ENTER key  
selects from a menu or list. The ESCAPE key exits  
to the previous window, at which time you have  
the option to save changes. Records are first saved  
to a temporary file. If there is an interruption (such  
as a power failure) during a save, an incomplete  
record is automatically discarded. This feature

goes far to ensure integrity of the data base.

#### Suggestions for Enhancement of Future Versions

The Maximizer is already a very attractive  
program, but software companies constantly strive  
to enhance their products. Some suggestions to  
Pinetree Software are:

1. Supplying printer drivers. The proliferation of  
printers on the market makes this task increasingly  
difficult for software companies.
2. Auto purge dates to be entered on some types of  
records, so that such records can be automatically  
deleted or downloaded on a date when they will  
clearly have become obsolete.
3. The setup program should make provision for  
using two 1.2Mb drives.
4. Making provision for serial printers.
5. Printout of mortgage schedules.
6. Re-positioning of windows so they don't block  
display of the name to which the displayed record  
is related.

Pinetree Software Canada Ltd. is listed on the  
VSE. The firm is located in Richmond, B.C., so  
product support is available to registered users via  
a Richmond phone number.

The Maximizer can now import and export  
data, it is no longer copy protected, and is supplied  
on both 5.25 " (360Kb) and 3.5" (720Kb) disk-  
ettes. The single user version is very competitively  
priced at \$195.

Timing of this product is excellent, it is de-  
signed to run on lap top computers, sales of which  
are expected to grow rapidly and sales executives  
are particularly attracted to portable computing.

Pinetree aims to become the leader in sales  
productivity software. The Maximizer is attrac-  
tively priced, user friendly and is a powerful sales  
productivity tool. It should be a winner.

Chris J. Metten, B.Com. (325-9609) is a  
Technical Writer and Photographer, who  
specializes in writing software and hardware  
user manuals.

#### PC SOFTWARE REVIEW

### Pixie Performs (Slowly)

**PRODUCT:** PIXIE  
**PUBLISHER:** Zenographics  
**SYSTEM REQUIREMENTS:** PC / PS2 or  
100% compatible Windows 2.0x compatible  
graphics card, 512K RAM, Mouse, DOS 3.0x  
Hardware recommended. AT (12Mhz +) with  
fast access disk (a 386 for real production),  
VGA graphics card (an accelerated graphics  
card like the NEC MVA 1024 or VIDEO 7'S V-  
RAM card with 512K on board will help move  
this program a little quicker.  
**PRICE:** \$U.S. 195 Fonts \$95 each.

Pixie by Zenographics is a PC Windows 2.0x  
based charting and drawing program aimed at  
those of us interested in getting our "computer  
visuals" off-screen & onto paper or transparency.  
Pixie has the capability of producing very sophis-  
ticated presentation graphics. The package is a  
micro version of Zenographic's high end colour  
graphics package Mirage. With Pixie you can pull  
in (import) a number of text and graphic files from  
other sources such as: Lotus.PIC, CAD.DFX,  
CGM, Videoshow.PIC, & ASCII text - either  
directly or through the Windows MetaFile (WMF)  
with its inherent 64K limitation. Output files from  
Pixie can be sent to most Windows compatible  
output devices. As well Pixie images can be trans-  
ferred to Desktop Publishing packages, such as  
Pagemaker. Output file formats currently avail-  
able for Pixie are: 1) Computer Graphics Metafiles  
(CGM) the old standard which imports to most  
Desktop, and drawing program. 2) Windows Meta  
Files (WMF) (Compatible with Ventura Publisher  
version 1.12 patch using the CLIPTOVP.EXE  
file, and Pagemaker 3.0. 3) SCODL files which  
are used to drive the matrix cameras which pro-  
duce high resolution (2250 by 1500 lines) colour  
slides from computer files.

#### Who Needs Pixie?

Anybody who has to make presentation visuals

on a regular basis, and has to do them well in a  
short period of time without expending much  
creative energy. With a few simple menu selec-  
tions you can achieve some very impressive look-  
ing colour slides, colour plots and thermal colour  
printouts for a very reasonable unit cost (black &  
white output on most Windows compatible output  
devices too for even less).

#### Problems & Headaches.

Some problems exist with Pixie. To summarize  
briefly: bitmapped fonts, transfer problems, slug-  
gish performance, bugs & Windows WIN.INI  
nightmares.

That Pixie, billing itself as a high resolution  
output charting package, comes with only bitmap-  
ped fonts was astounding and irritating. Though  
they promise to send you Helvetica in the mail  
(reg. \$95.00 US value) for free with your registra-  
tion card, at \$95.00 US a pop for fonts your  
creativity quickly becomes limited by your budget.  
Not surprisingly, only Pixie, Mirage, Autumn (all  
sister packages) fonts work with this program.  
Also note that these are not vector fonts, only filled  
polygons at what looks to be about a 280 dpi  
resolution. From the packaging, I was misled into  
thinking all my Windows fonts were available as  
the package accesses them. They are, but only in  
their bit mapped form, which means not smooth  
curves when going to an output device.

#### Exporting Artwork

Importing artwork created by Pixie into Ven-  
tura Publisher was unsuccessful in all my attempts  
using the WMF format. Importing them simply  
dumped Ventura from memory. Importing WMF's  
created by Pixie resulted in no image being trans-  
ferred both in Ventura 1.12 and in Pagemaker 3.0.  
GEM and CGM file formats transferred to Ven-  
tura and Pagemaker but with poor results when  
colour was used and the results were not pretty.  
Only the black & white images exported as CGM  
files were successful in their appearance.

#### Speed, or Lack Thereof

Speed is another thing which this program lacks.  
Screen refresh times are abysmal. Pixie in their

documentation acknowledge this and make some  
useful suggestions which you would be wise to  
follow; like letting your computer do the work  
overnight.

#### The Dreaded WIN.INI Configuration

The other problem area for this program is  
really inherent in all Windows programs - that  
dreaded WIN.INI file which is the necessary evil  
allowing you to access printing devices and cus-  
tomize performance in this and all other Windows  
based applications. In this case Pixie provide  
some "magic numbers" which can be placed in the  
WIN.INI file and then modified to customize per-  
formance in Pixie, things like drop shadow text  
and text border widths etc.. Unfortunately they did  
not work on the first effort, but I remain hopeful.

#### What It Does Well

The good news. Importing graphics into Pixie  
is a snap and in all my attempts successful in all  
file formats claimed. Text imports well as ASCII  
and the typographic controls within the program  
are acceptable though slow. Colour control and  
control of the charting functions is excellent. The  
charts you create are what Pixie refers to as  
"smart", that is they are context sensitive to their  
function. That is, if you modify a value of a 3-D pie  
chart with four segments the remaining three are  
modified in visual proportions which reflects the  
new value. Creating charts is a snap as Pixie has  
several preexisting formats you can just stuff your  
data into and have good looking results immedi-  
ately. Making new charts is speeded by having to  
only set three instances of a chart's increments  
and Pixie guesses the rest. My sample output was  
of good quality, the thermal colour printer and  
matrix camera images I had produced locally at  
Graphically Speaking were of excellent quality,  
thanks to some creative backgrounds provided by  
the production staff.

Ward Stirrat is a local electronic publisher  
and graphic artist. 734-3594



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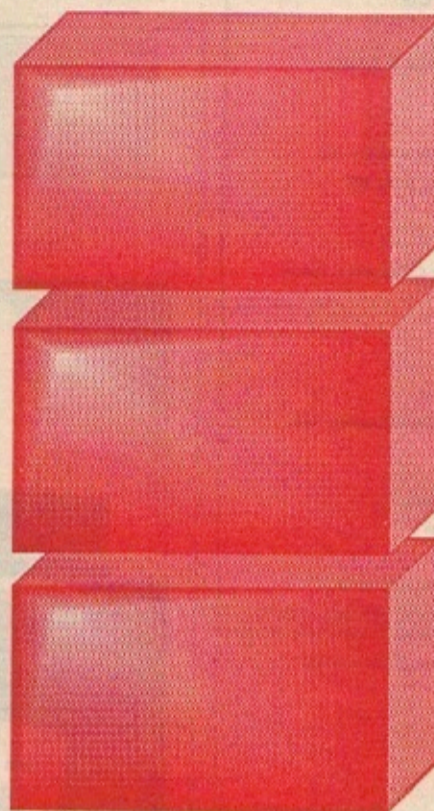
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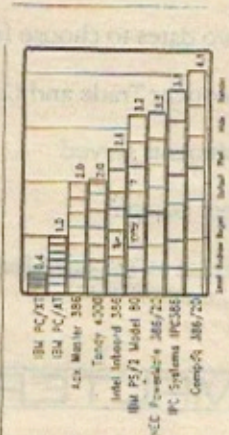
#### Non-Cache Model

Norton SI 4.0	23.0
Landmark 0.99	25.5
Power Meter 1.02 MIPS	2.53

#### Cache Model

Norton SI 4.0	23.0
Landmark 0.99	29.4
Power Meter 1.02 MIPS	4.133
Power Meter 1.02 Kwhetstones	774.061

### Evaluation Report\*\*\*



\*\*\* Reprint with permission from CADalyst Publication, (October, 1988 issue). Test was conducted using an IPC Model 386-C2040.

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\* Available for IPC 386 models only. Includes first full year parts/labor warranty, second and third year labor. On-site warranty is available for Vancouver region (City of Vancouver, Richmond, Burnaby, West & North Vancouver, Delta). 3 year warranty is available in B.C. only. Intel, COMPAQ, Tatung, Microsoft, Unix, OS/2, UNIX, XENIX, PC-DOS, MS-DOS, NOVELL, Windows 386, Concurrent DOS, PC-MOS, LIM/EMS, Norton, Landmark, Power Meter, XT, AT are registered trademarks of their respective owners.

## DeskPaint 2.0 Strange And Wonderful

**PRODUCT:** DeskPaint 2.0 & DeskDraw .95  
**PUBLISHER:** Zedcor 4500 E Speedway #22  
 Tucson, Arizona 85712-5305 (602) 881-8101  
**SYSTEM REQUIREMENTS:** 512KE Mac or  
 better. System 4.1 or higher. Requires 45K  
 RAM. Desk Accessory  
**PRICE:** \$U.S. 60

### The Program

DeskPaint, from Zedcor, is a full-featured paint program for the Apple Macintosh that works as a desk accessory. While it rivals many of the currently available stand-alone programs and has some unique features, it is a little weird in its approach to doing things.

### The Features

It is an extremely useful accessory since it lets you create, import, and edit bit-mapped images without having to exit your page layout or word processing program. It includes a stand-alone version, but was designed mainly as a RAM-resident desk accessory.

DeskPaint provides a bit-mapped graphics editor with such advanced features as a Line tool with 64 weights and heights, a Brush pattern, a 16 level Zoom tool, a Text tool (which defines a text wrap rectangle), free rotation of objects and text, 170 editable patterns, (a pattern table is available for mixing them) and several copy over modes. There is also a grabber hand.

One unique feature is the ability to lighten or darken selected areas of an image using a set of percentage screens. The program can work with TIFF and MacPaint files and supports large-screen monitors. You can scale objects either proportionally or freehand.

DeskPaint's zoom feature has a range of 16-to-1 magnification or reduction.

One of the neatest of the new features in DeskPaint 2.0 is the autotrace function of bit maps. It is a bit kludgy to use. You have to copy and paste the resulting vector graphic into another program (presumably DeskDraw once they get it up to snuff.) because DeskPaint is a bit mapped program. But it can bring new life to old MacPaint clip-art collections. The program also includes a slide show feature.

### Multiple Windows (Sort Of)

There are no actual multiple windows. Zedcor gets around this shortcoming by including three copies of the program named Deskpaint, Deskpaint2 and Deskpaint3.

### The Documentation

The paperback documentation is clear and complete. The manual, as befitting a graphics program, is profusely illustrated with a column of text flanked by headlines in bold letters highlighting the main points.

### Text Handling

There also is a layer of text tools available. You can enter text, move and resize it, and then turn it into a bit-map.

### The Problems

This version is reasonably fast given the limitations of DA's, however the use of some tools can still be jerky, especially switching to text mode.

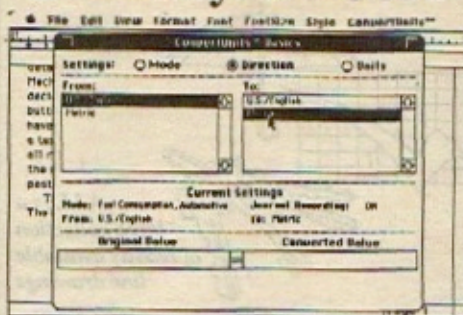
### DeskDraw .95

Zedcor seems to be in the habit of issuing unfinished programs. They did this originally with DeskPaint .95, and then through user feedback they refined the program and improved its speed and screen handling. DeskDraw is still very much an unfinished product, but like its predecessor holds much promise. The most promising feature is the simple ability to free rotate text and then paste it back in to a page layout program such as PageMaker.

### It Is A Good Deal

DeskPaint is an impressive, non-copy protected program, regardless of its strange ways, (i.e. the autotrace function, handling multiple windows etc.) that is still well worth considering for its strength.

## Local Boys Do Good



*ConvertUnits was developed in Vancouver by  
GraphicText Applications*

### PRODUCT: ConvertUnits

**PUBLISHER:** GraphicText Applications 815  
 Princess Ave., Vancouver (604) 255-8077  
**SYSTEM REQUIREMENTS:** DA: 512K or  
 better, HyperCard version: 1 MacPlus or better.  
**PRICE:** U.S. \$59.95 each or \$79.95 for both

### Life is Just A Conversion Process

Did you ever wonder how big the Earth was in relation to Saturn? Or need to know right now, how to convert miles per gallon to kilometers/litre? The answer to these and over 120,000 other different conversions can be at hand under the Apple menu on your Macintosh when you buy the newly released ConvertUnits measurement unit conversion program. The program was developed by a local Vancouver company called GraphicText Applications. This program, available in both desk accessory and HyperCard stack formats, is a powerful and comprehensive way to convert over 1500 different units of measurements.

The program groups the units of measurement into 9 different data files; Basics, Electricity, Heat, History, Light & Radiation, Mechanics, Time, Unit Costs & Quantities and Whimsy. Once you decide which area your conversion is in, you select three more buttons, enter your desired unit, push the "equals" sign key, and you have your answer. The program neatly records your conversions into a text file, so that if you are doing a batch of conversions, they are all recorded. You have the option of not saving the file at the end of the session, and you can use the standard copy and paste routines to place the number into word processors or spreadsheets.

### One, Two, Three-Convert

The three buttons you must click are Mode, Direction and Units. The Mode further defines what type of conversion you desire. Direction allows you to determine which way you are converting, for example from US/Imperial measures to Metric. Finally you pick your units such as gallons and litres. Then you enter your amount and push the equal key and you have your conversion in a fraction of a second. (On the DA version, the HyperCard stack is a tad slower.) It is a very handy utility if you are in design, engineering, business, research, education, school, or even if you have curious seven year olds who just have to know.

### Not Totally Converted

A minor complaint against the first version are that the program doesn't remember where its data files are and every time you want to switch categories you have to renegotiate your way back to the folder that holds them. I would also have liked to have been able to double click on the Mode and them be moved directly to the Direction choice. This would speed up the selection process. Finally, a scrollable list of all the units contained would have been nice. Right now if you are in search of something, you must go through the designers categorization of the units to discover where a particular unit is stored. Instead, if you could scroll a list of measurements and double click on the one you wanted, searches would be faster. This would then bring you into the possible conversion areas that are available.

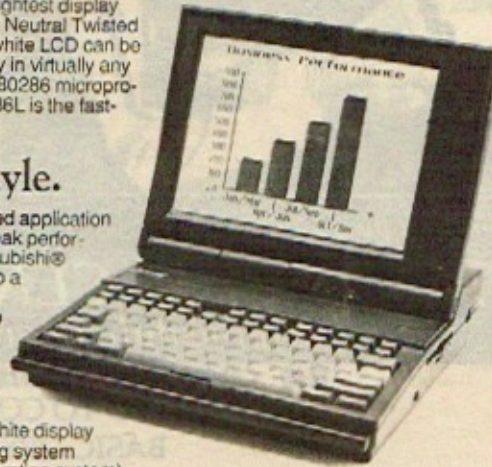
### Further Conversion Plans

The company does plan upgrades with new units being added as well as program upgrades. They are also scheduling an MS-DOS version for mid 1989. All in all, it is a very impressive program, professionally done and extremely useful to the right people.

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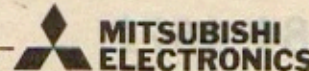
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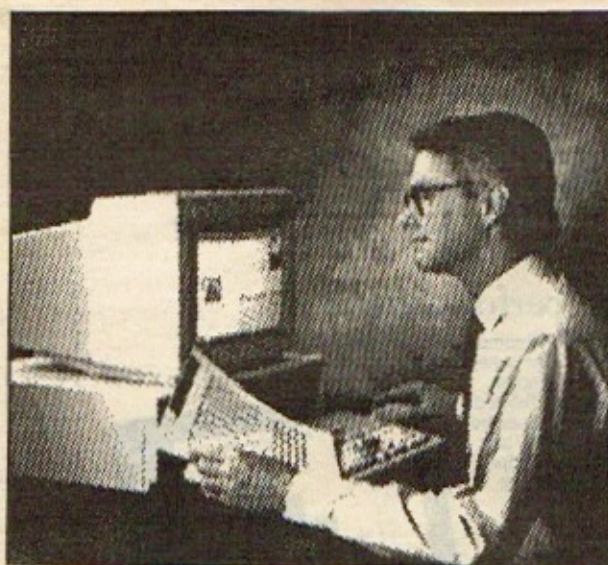
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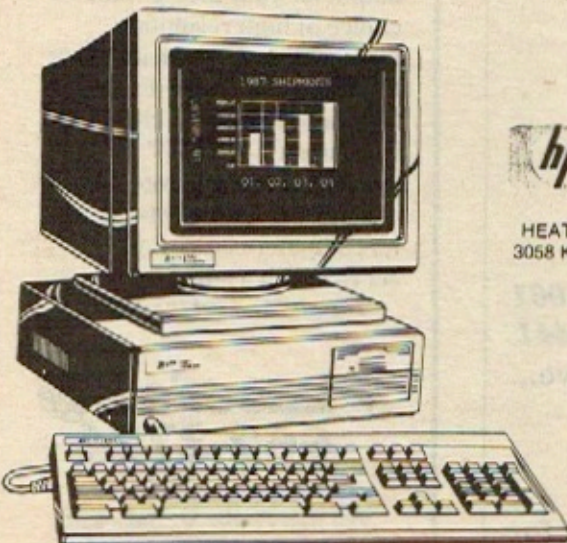
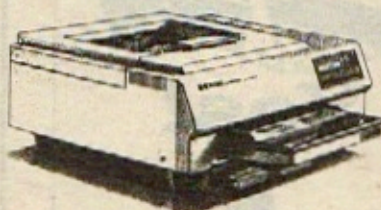
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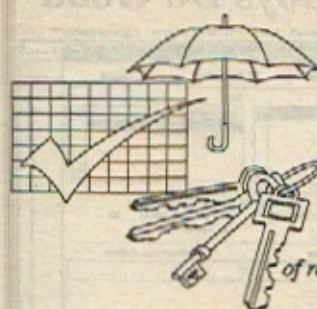
hp HEWLETT  
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## PC SOFTWARE REVIEW

### Art On Disk



A&L is a  
large collection  
of readily available  
line drawings

PRODUCT: Arts + Letters Graphic Composer  
version 1.0

PUBLISHER: Computer Support Corp.

SYSTEM REQUIREMENTS: IBM PC, PC  
AT, and compatibles, 512K RAM and a hard  
disk and Microsoft Windows 1.04, or higher.

PRICE: U.S. \$395 Optional typefaces \$25  
each.

This software is great for non-artists needing to generate attractive, professional images for their publications. Arts & Letters does not rely on your drawing skills to help you generate high quality brochures, charts, and flyers. Arts + Letters has no tools for creating circles, arcs, squares, etc., and instead provides a large library of vector-based symbols. The symbols include the entire complement of geometric figures, and come with an indexed handbook for quickly locating the right symbol. It offers more than 2200 symbols, sketches, and icons rather than pens and paintbrushes. The library is filled with object oriented graphics including, computers, office equipment, musical instruments, maps, urban landscapes, and anatomical drawings.

It supports Microsoft Windows interface with pull-down menus and mouse support.

Importing symbols is also very easy, and once imported you can use Arts + Letters' editing tools to modify them in a variety of ways. You can change an image's size, rotate it, slant it, put it in front or in back of another object, flip it, and change its color. Only eight standard colors are available, but they can be mixed to create others. The lack of free drawing capabilities is both the program's greatest strength and weakness. By leaving out the tools to modify images they have kept things very simple, on the other hand there are times when simple modifications would greatly enhance the desired image. Arts + Letters does not permit you to edit the supplied symbols or create customized ones. However, you can export symbols to any Windows paint program, edit them, and then bring them back. But this requires that a separate program be purchased.

Other complaints are that the program lacks a grid system and cannot trace low-resolution scans and bit-maps, but can import those images from other programs. It is also very slow.

#### File Import/Export

Arts + Letters can import TIFF, WMF (Windows EPSF), PICT, Microsoft Paint, ASCII, and Diagram/2000 files, and it can export EPS, WMF and CGM files. It takes full advantage of the Windows clipboard, and PageMaker and Ventura Publisher can import its files directly, including an on-screen representation of the image.

#### Type Handling

The program provides a text editor that lets you import ASCII text blocks of up to 5000 characters. The program treats text and graphics the same. This allows you to use the editing tools to modify it in a similar manner to modifying symbols. Typefaces can be rotated, filled with a variety of patterns and gray tones, and outlined or reversed. You can blow up text, thicken lines, create drop shadows, and adjust the spacing between characters.

#### The Missing Fonts

Here the packaging of the program is a little on the fuzzy side. On first examination it appeared that a large variety of fonts were included. In fact, most of them must be purchased separately.

#### Conclusion

Arts & Letters is an easy to use, flexible package of ready to use clip art with bonus fonts included. It is reasonably priced for what is included. If you are not much of an artist and can only afford one drawing program, Arts + Letters is a good choice.

## PC SOFTWARE REVIEW

### This Data Base Does Graphics

PRODUCT: Opus I Version 2.0

PUBLISHER: Roykore Software 749 Brun-  
swick St. San Francisco, CA 94112 (415)  
333-7833

SYSTEM REQUIREMENTS: 512K IBM PC  
or PS/2, hard drive recommended, CGA, EGA,  
VGA, or Hercules; mouse recommended, run  
time Windows included, 5.25" disks.

PRICE: U.S. \$395

#### What Does It Do?

Opus I is a relational database running under Microsoft Windows with an integrated drawing environment that bills itself as "the hyperdrawing program for your PC". What that means is that you can create a visually oriented database. For example, you might have a map of Canada as your opening screen. Clicking on British Columbia would bring up a larger map of B.C. Another click on Vancouver would bring up a map of Vancouver and then from there clicking on an object would bring up your data on various sales outlets, or where the best restaurants are etc.

#### Is It Hypercard on a PC?

Opus I is probably better described as a combination drawing and relational database program. It has some features similar to the Macintosh program Hypercard such as the ability to create linking buttons, or objects which when double clicked display data. It is not however as complete a programming environment as Hypercard, limiting itself to database functions. In many ways it is simpler to use than Hypercard, not requiring as extensive an understanding of programming. It has a better set of database functions immediately available than Hypercard. Hypercard allows programmers to reach outside of the program and control other programs through the use of X commands. Opus I will not allow this type of programming. In addition, Opus I uses object oriented graphics versus Hypercard's bit mapped graphics. It is probably more closely comparable to another Macintosh database called Business Filevision. Last but not least, Hypercard is free which has allowed it to become a standard way to distribute data on the Macintosh, whereas Opus I is \$395.

#### How Good a Drawing Program Does It Have?

The drawing environment in Opus I is quite sophisticated. It allows you to draw the standard variety of polygons, circles, squares, rounded rectangles and ellipses. In addition it has a free-hand drawing tool. You can rotate, stretch, move or duplicate objects. Effects that cannot be achieved from within Opus may be imported from other Windows drawing programs through the Clipboard. The program has eight levels of zoom, six in and two out from 100%. One complaint against Opus I is that all the tools for drawing have to be accessed from the menu bar. It does not have a visual tool box on the screen which has become standard with most drawing packages. This means more reading and hunting around for the desired tools. To summarize, it is a decent drawing package but nothing to write home about.

#### How About Data Basics?

The database includes the standard search and selection functions used to locate records that meet particular criteria. The outstanding feature of the program, is that you can also graphically display the selected information in your drawing as well, so that graphics assigned to the selected records may be highlighted, or hidden from view.

#### What Are The File Limitations?

Each file can contain up to 10,000 records with a maximum of 100 fields per drawing file. The maximum number of characters per text field is 1023 and it will manage up to 15 decimal places in numeric fields. Drawing sizes are limited to 16.5" by 16.5" (42 cm X 42 cm)\*

#### Is It For You?

If you are in the market for a database manager and you have a situation which would be enhanced by a visual approach, consider Opus I. It does all the basics of data management well, has an easy-to-learn approach to programming, with the added bonus of tying your data to a visual format.

\*courtesy of ConvertUnits



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Memory Expansion	-----	Expandable to 4 MB on Board
Clock Speed	-----	12/6 MHz Switchable (Norton Utilities Index: 13.3)
ROM	-----	Award ROM BIOS
Clock/Calendar	-----	Real-Time with Battery Back-Up
Expansion Slots	-----	8 Slots (2-8 Bit, 6-16 Bit)
Controller	-----	NCL Hard/floppy disk controller
Interface Ports	-----	1- Parallel and 2 - Serial Ports
Storage Bays	-----	3 - Half Height Storage Device Bays
Floppy Disk Drive	-----	Teac 1.2 MB Floppy Disk Drive
Video Card	-----	EGA Color Graphics Video Card
Keyboard	-----	AT Style Enhanced, 101 Keys
Software	-----	MS DOS Version 4.0 and GW Basic
Front Panel	-----	Reset & Turbo Switches and Keylock
Optional	-----	80287 Math Co-Processor

## 40 Megabyte Hard Disk

Hard Disk	-----	Miniscribe 3650 HD (1/2 Height)
-----------	-------	---------------------------------

## EGA Color Monitor

Monitor	-----	Mini-Micro/Packard Bell EGA Color (14" Screen .31 mm Pitch, 640 H X 350 H)
---------	-------	---

## NEC 24 Pin Printer

Printer	-----	NEC P2200 Printer 24 Pin
Speed	-----	170 cps/draft mode, 55 cps/ NLQ mode
Width	-----	80 column wide
Font	-----	6 Fonts Available
Paper Handling	-----	Built-In Push/Pull Tractor Automatic Sheet Feeder
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Buffer	-----	8K Internal Buffer

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November 1, 2 & 3, Vancouver had its very own computer show, The Pacific Rim Computer and Communications Show. While small in relationship to Comdex in Las Vegas, it had lots of exciting new products on display. Highlights of the show included an impressive 8,000 square foot booth from Toshiba complete with racing car and gymnastics horse. NEC had a popular booth with a host of computers to touch. Laptops were in abundance at many of the booths. Other Japanese vendors included Sanyo, Epson, Matsushita, and Roland DG. The Korean contingent included distributors of Laser and Samsung. American computer manufacturers included Zenith, Xerox, and a noticeably small booth by IBM.

Local compatible manufacturers Comtex, DPS, IPC and MDS were there in force, out to demonstrate their latest high powered and cost effective hardware.

The high end of Apple's computer line, the Macintosh II series

was well represented by Behusen's, Infomax and Computer Connection, though a few show visitors complained about a lack of lower end Macintosh products. Color laser printers were on display both at Infomax and QMS's booths. Computer Connection had even dragged in a new Linotype L200 high resolution phototypesetter. Infomax demonstrated the versatility of the Macintosh with a complete 3 Com network including a VAX minicomputer in their booth.

The first day was a bit of a wipe out for the Medical Software Vendors section as doctors stayed away in droves. Things improved later, and most vendors left feeling like they had justified their expense with new contacts and some sales.

The show was co-sponsored by CIPS, the Canadian Information Processing Society who put on all the seminars at the show. According to one of the organizers, John Blackwell of Douglas College,

most of the seminars were sold out. He said there was a good deal of interest in Networking and Desktop Publishing.

Show organizer Helene Levasseur of Tracon said that there were in excess of 17,000 attendees. Hopes had been high that the turn out would have been considerably more than last year. In fact the numbers were very similar to last year's attendance. Many blamed the rainy weather and limited downtown parking for the lackluster showing. Most vendors however, seemed pleased with the show. The Computer Paper did a quick poll at the end of the show to question the exhibitors. Their responses follow.

We at The Computer Paper booth had a good time, managed to give away in excess of 10,000 copies of our paper to the show's many visitors and got a chance to meet some of the people who read our paper regularly. All of your input was greatly appreciated.

-Kirtan Singh Khalsa - Editor

Jerome Lim  
COMTEX

"A lot of end user enquiries and we had our own dealers in to help complete sales. We were here to get people familiar with our name and we hope we have achieved that."



Bijan Sanii  
INFOMAX COMPUTERS

"Absolutely excellent."



Sam Oben —  
COMPUTER USERS  
GROUP OF B.C.  
"Interesting and educational."



Marie Aupede  
MULTILOG  
"We were disappointed with the doctors' turnout on the first day. But the second and third days were much better."



Kirk Henry  
QMS  
"We were very pleased with the amount and the quality of the people."



Paul Yong  
SEACORP TECHNOLOGY  
CORPORATION  
"Good — we had a lot of leads."



Mark Cooper  
COOPER & ASSOCIATES  
"Great excellent opportunity for people to see the new technology. We were very excited about the new NEC 386 grey scale laptops."



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As a shopping guide for your computer oriented friends, we have taken liberty of including portions of two best seller lists made available by computer products distributors. The first "Hot List" is compiled from Softsel sales to over 19,000 resellers in the U.S. and 30 other countries including Canada. The second "Hit List" is compiled by Frantek, a Canadian distributor of software.



### Softsel's Hot List

This Month	Last Month	Months on Chart
1	2	91
2	10	53
3	—	1
4	3	55
5	8	2

1	1	52
2	2	94
3	3	46
4	4	14
5	5	30

1	1	53
2	3	5
3	2	53
4	6	38
5	5	3

1	1	61
2	2	166
3	12	70
4	3	6
5	8	268

1	1	55
2	2	49
3	3	185
4	4	102
5	5	236
6	8	80
7	6	83
8	9	23
9	—	1
10	10	13

1	1	236
2	2	300
3	3	147
4	9	106
5	8	52
6	4	149
7	6	259
8	5	87
9	17	112
10	12	78

1	1	47
2	2	265
3	4	113
4	3	33
5	6	49
6	8	25
7	7	231
8	9	17
9	—	1
10	10	52

1	2	226
2	1	103
3	3	70
4	4	43
5	5	33

1	1	301
2	2	3
3	3	145
4	4	69
5	5	49

#### PRINTERS

KX-P1080I Dot Matrix • Panasonic  
KX-P1524 Dot Matrix • Panasonic  
150P Inkjet • Diconix  
P2200 Pinwriter • NEC Information Systems  
KX-1124 Dot Matrix • Panasonic

#### MONITORS

Multisync II • NEC Home Electronics  
410 Monochrome • Amdek  
Diamond Scan Aum 1381 • Mitsubishi  
Color 732 Analog • Amdek  
SC-141-C EGA • Mitsubishi

#### DISK DRIVES & STORAGE DEVICES

Hardcard 20MB • Plus Development • IBM  
3-1/2" Drive 1.44MB • Toshiba • IBM  
Hardcard 40MB • Plus Devel. • IBM  
5-1/4" Drive 360K • Mitsubishi • IBM  
20MB ST225 Kit • CMS/Seagate • IBM

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Smartmodem 2400 • Hayes  
EGA Wonder • ATI Tech. • IBM  
Basic EGA Card • Paradise Syst. • IBM  
Smartmodem 1200B • Hayes • IBM

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Microsoft Mouse Paintbrush • Microsoft • IBM  
Logitech Mouse • Logitech • IBM  
MasterPiece • Kensington • IBM  
Intel 80287 Coprocessor • Intel • IBM  
MS Mouse Paintbrush/Windows • Microsoft • IBM  
PC Mouse w/Designer Pop-Up • Mouse Systems • IBM  
SS-III System Stand • Curtis Man. • IBM, MAC  
Intel 80387 Coprocessor • Intel  
TOPS Teleconnector • Sun Microsystems • IBM, MAC  
NSIM 2MB Memory Upgrade • Nat. Semiconductor • MAC

#### BUSINESS

WordPerfect • WordPerfect Corp. • AP, IBM,  
1-2-3 • Lotus • IBM  
dBase III Plus • Ashton-Tate • IBM  
Microsoft Works • Microsoft • IBM, MAC  
Harvard Graphics • Software Pub. • IBM, NT  
Microsoft Windows • Microsoft • IBM  
Microsoft Word • Microsoft • IBM, MAC  
WordPerfect Add. Stations • Wordperfect Corp. • NT  
PFS:First Choice • Software Pub. • IBM  
Multimate Adv. II • Ashton-Tate • IBM

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PC Tools Deluxe • Central Point • IBM, MAC  
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Fastback Plus • Fifth Generation • IBM  
Close-Up • Norton • IBM  
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Turbo C • Borland • IBM  
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Print Master Plus • Unison World • AP, IBM  
Calendar Creator Plus • Power-Up • IBM

#### RECREATION

Microsoft Flight Simulator • Microsoft • IBM, MAC  
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Where in World Is C. Sandlego? • AP, IBM, MAC  
Mean 18 Ultimate Golf • Accolade • AP, IBM, MAC  
Falcon • Spectrum Holobyte • IBM, MAC

### Frantek's Hit List

This Month	Last Month	Months on Chart
1	1	3
2	4	32
3	2	24
4	3	25
5	7	6
6	8	18
7	9	16
8	—	20
9	5	2
10	10	17

1	2	16
2	1	2
3	5	9
4	3	19
5	—	13

1	1	10
2	4	3
3	—	—
4	2	22
5	—	6

1	2	45
2	3	12
3	2	46
4	4	24
5	—	34

1	1	17
2	2	11
3	4	20
4	3	20
5	5	8

1	1	12
2	2	20
3	3	13
4	5	2
5	4	4

1	1	2
2	4	17
3	5	16
4	—	8
5	8	16

1	1	9
2	3	12
3	—	10
4	4	24
5	5	13

#### BUSINESS

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Microsoft Excel • Microsoft • IBM, Mac  
Microsoft Word • Microsoft • IBM, Mac  
Integrated Accounting • Bedford Software • IBM  
Simply Accounting • Bed. Software • Mac  
Microsoft Works • Microsoft • IBM, Mac  
Filemaker Plus • Nashoba Systems • Mac  
dBase III Plus • Ashton-Tate • IBM  
WorksPlus Spell • Lundeen & Assoc. • Mac  
PFS First Choice • Software Pub. • IBM

#### GRAPHICS

Adobe Illustrator 88 • Adobe Syst. • Mac  
Graph Plus • Micrografix • IBM  
Canvas • Deneba Software • Mac  
Cricket Software • Cricket Software • Mac  
SuperPaint • Silicon Beach Software • Mac

#### UTILITIES

Le Menu • Bartel Software • IBM  
PC Tools Deluxe • Central Point Software • Mac  
SiftCase • Fifth Generation • Mac  
Microsoft Windows • Microsoft • IBM  
Macro Assembler • Microsoft • IBM

#### EDUCATION/HOME

Typing Tutor IV • Simon & Schuster • AP, IBM, Mac  
Learning DOS • Microsoft • IBM  
The Print Shop • Broderbund • AP, IIGS, Mac  
Where in the World Is Carmen  
Sandlego • Broderbund • AP, IBM  
Bank Street Writer • Broderbund • AP, IBM

#### PRINTERS

PR1012 120 CPS Dot Matrix • Roland  
PR1112 160 CPS Dot Matrix • Roland  
PR1215 180 CPS 15" Dot Matrix • Roland  
PR1212A 180 CPS Dot Matrix • Roland  
PR1250 240 CPS Dot Matrix • Roland

#### MONITORS

V410A 12in. TTL Amber • Amdek  
V242A 12in. Amber Tilt • Datatrain  
V252A 12in. Multi-Sync Amber • Datatrain  
DC205 CGA Colour Monitor • Datatrain  
DC353S 14" RGB Colour • Datatrain

#### PERIPHERALS

PhoneNet Connector • Farallon Computing • Mac  
Microsoft Mouse • Microsoft • IBM  
Pro Grappler • Orange Micro • APIIE, IIGS  
S85 Surge Protector • PTI (Datashield)  
MacLink Plus • Dataviz • Mac/PC

#### SPECIAL APPLICATIONS

Tops • Tops • IBM, Mac  
Xerox Ventura Publisher • Prometheus/Ventura • IBM  
All Charge Card • All Computers • IBM  
Ready Set Go! • Letraset • Mac  
PC Blast II • Communications Research Group • IBM



### Other Gift Ideas....

Because these lists are from U.S. and Canadian national distributors, not all of these items will be available locally. Other suggestions for gifts beyond the realm of the Hot List might include such things as:

**Training:** See the Computer Calendar for names and telephone numbers of a large variety of computer training centres, including: Byte Computers, Oncourse Learning Centre, Computerland Folkstone Designs, The Vancouver Desktop Publishing Centre and others.

**Training Videos:** The Video Learning Store (gift certificates available)

**Games and Other Software:** wide selections of games are available at many computer stores. Stores with the best selections include M C Micro Centre (IBM, Mac), Super Software (All types), Doppler's (IBM), Friendlyware (Commodore, IBM, Apple II), and Nu-Tek for (IBM, C-64 and Amiga).

**Shareware Software:** Sim Com Services and PD-SIG have good selections of inexpensive power programs.

**Portable Computers:** See the next section on a buyers guide to Laptops.

**Computer Supplies:** Calcon Computer has all kinds of goodies for the person on your list with a laser printer.

**Books:** See our Booksellers' Bestseller List on the back page of this issue for current popular titles and where you can pick them up. Also check out the Book Warehouse.

**Computers:** And of course through out this paper you will find advertising for sales and service of the latest and greatest computers for home and office.

Whatever you buy, please tell the vendors if you saw their ad in The Computer Paper. Their advertising dollars are what allow us to keep providing you with up to date information on computers - Thank you.

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SHARP FO-220 .....\$1499  
(Similar to FO-420, without cutter)  
CANON FAX-8 .....\$1100  
PANASONIC 150/155 .....\$1600

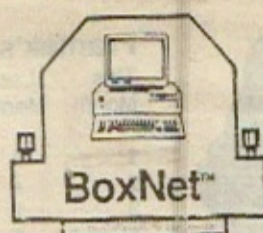


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Samsung S330 W/Monitor .....\$990.00  
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Tatung Multisync Monitor .....\$528.00  
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NEC P5300 PRINTER: 136 columns,  
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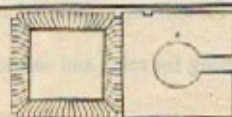
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## The Best Desktop Publishers in B.C.?

### The Colour of Black Design Contest

The Colour of Black showcased the entries and the winners of the 1988 VEPA Awards. Presented by the Vancouver Electronic Publishing Association (VEPA), it was on exhibit during the DESIGN VANCOUVER seen all over the city during October 21 to 30. Located at the Vancouver Trade and Convention Centre, Cruise Ship Terminal Level, The Colour of Black was open to the public from October 22 to 28. Sponsored by Adobe Systems Inc., Letraset Graphic Design Software, and Quark Inc., organized by Marion Munro, member of VEPA Board, and curated by Tom Graff, the exhibition was very successful. More than 1600 visitors viewed the gallery during the week.

A wide variety of work was displayed. Exhibit labels explained all the artists' tools: software, hardware and output. The winners ranged from broadsheets, disk labels, stationary packages, wedding invitation series to an art book-work already in the collection of the National Gallery of Canada.

Surprisingly, 83% of the 180 entries were made using the Apple Macintosh. Only 3 out of the 25 winners were produced on DOS machines.

The Macintosh designers used software in the following proportions: 54% with Adobe Illustrator; 43% with Aldus PageMaker; 20% using Aldus FreeHand, and; 11% using Quark Xpress.

Of the DOS-developed designs: 68% used Xerox Ventura Publisher, while 35% used Aldus PageMaker.

### And The Winners Are....

#### Grand Winners:

•Giampa Textware, Jim Rimmer, designer: Broadsheet and disk label. Prize: Aldus, *Page-Maker 3.0 for the Macintosh*.

•Tom Graff Exhibitions, Tom Graff, designer: Galileo bookwork. Prize: Aldus, Aldus FreeHand plus Silicore Books, 222-2221, \$50 gift of books.

•Studio Allsorts, Dale Simonson, designer: Wedding Invitation series. Prize: Linotype Canada, 222-0166, \$250 worth of Linotype output.

Keith Martin, designer: 'Macfarlane Peacock' stationary. Prize: Microsoft Canada, 688-9811, *Microsoft Word, Version 4.0*

#### Winners:

•Tom Graff Exhibitions, Tom Graff, designer: The Alphabet, DTP type broadsheets. Prize: Advantage Computers, 430-3113, *Apple Personal Modem* plus Source Data Products, 687-7044, *Xerox Ventura Publisher, Version 2.0*.

•Keith Martin, designer: 'Sunrich' stationary package. Prize: Linotype Canada, 222-0166, \$250 worth of Linotype output.

Studio Allsorts, Keith Martin/Dale Simonson, designers: Telecommunications brochure. Prize: Copyco, 684-3655, \$200 worth of Linotronic L100 Output or Canon Colour Laser Copies.

•Keith Martin, designer: 'Artery', an arts periodical. Prize: Save on Laser Services, 685-2737, remanufacture of two laser printer toner cartridges.

•Keith Martin, designer: Wedding announcement. Prize: Infomax Computers, 688-0696, \$300 worth of QMS ColourScript PostScript printing services.

#### Honorable Mention:

•Power Station, Jim Lowe, designer: Georgia Medical-Dental Building poster. Prize: Aldus, *Aldus PageMaker 3.0 for the IBM*.

•Keith Martin, designer: 'Sylvan' stationary, packaging labels and brochure. Prize: Business Pictures & Words, 688-5468, \$250 worth of Canon Colour Laser Copies.

•Venture Communications Inc., George Pytlík, designer: 'Compufind' stationary. Prize: Laser's Edge, 662-3774, \$200 worth of Linotronic output (paper or film).

•Tom Graff Exhibitions, Tom Graff, designer: Annual literary journal, UBC, AMS. Prize:

Behnsen Graphic Supplies, 681-7351, *Power-Point, Version 2.0* by Microsoft, plus Folkstone Design, (604) 886-44502, *Gridmaker* for the Macintosh.

•Catherine Racene, designer: stationary, business card and invoice. Letraset, *Ready Set Go*.

•Wendy Stephenson, designer: 1987 personal Christmas card. Prize: Infomax Computers, 688-0696, and Claris Canada, *MacDraw II*.

•Keith Martin, designer: Touche Ross alumni party invitation. Prize: Infomax Computers, 688-0696, and Claris Canada, *MacPaint 2.0* and Abaton Technology, 685-7343, *ProPoint* optical track ball for the Macintosh.

•The Vancouver Desktop Publishing Centre, Patty Osborne, designer: 'Quotations from Chairman Zalm' broadsheet. Prize: Source Data Products, 687-7044, *Xerox Ventura Publisher Professional Extension*.

•George Streadwick & Assoc., George Stread-

wick, designer: Britannia Ridge logo. Prize: Quick-Set Graphics, 685-2777, 10 letter-size Linotype printouts.

•The Vancouver Desktop Publishing Centre, Patty Osborne, designer: Broadsheet. Prize: Source Data Products, 687-7044 and Sterling Micro Systems, Scanman and J Packit, 681-2981, \$75 towards a new or recharged laser printer toner cartridge.

•Praxis Design & Consultation, Bob Gibson, designer: 'Design Vancouver' program. Prize: Source Data Products, 687-7044, *Arts & Letters Composer*.

•Keith Martin, designer: 'Urban Subjects' promotional material and exhibition guide. Prize: Microsoft Canada, 688-9811, *Microsoft Power-Point, Version 2.0*.

•Keith Martin, designer: 'Adverse Practices' promotional material and guide. Prize: Supreme Graphics, 585-7313, \$100 worth of Linotronic

output to film or repro paper.

#### Organizer's Choice:

•Touche Ross, Peter Frances, designer: Survey results booklet. Prize: Altertext Conversions, 732-1416, \$100 worth of media conversion or Linotronic 300 output.

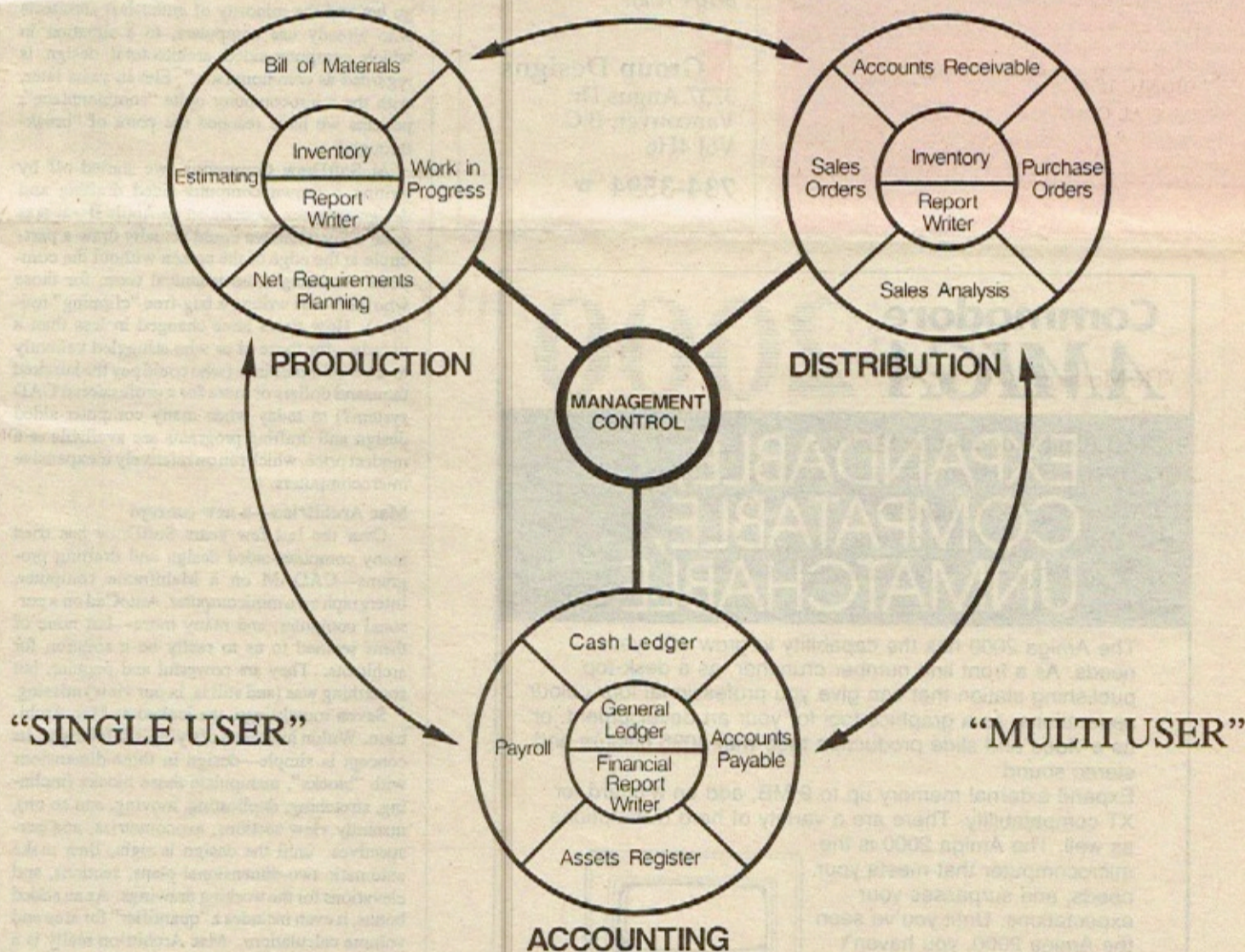
#### Organizer's Honorarium/Prize:

•Tom Graff Exhibitions, curator. Prize: Save on Laser Services, 685-2737, remanufacture of two laser printer toner cartridges, Trans Art Supplies, (416) 363-6156, 250 sheets of Laseredge Pro laser paper, plus Atlas Carbon & Ribbon Western Ltd., 251-3115, 3 boxes of 3 1/2" floppy discs.

Marion Munro was event producer for The Color of Black. She is also Article Coordinator for the Vancouver Electronic Publishing Association's publication Micropage. She can be reached at 224-6152

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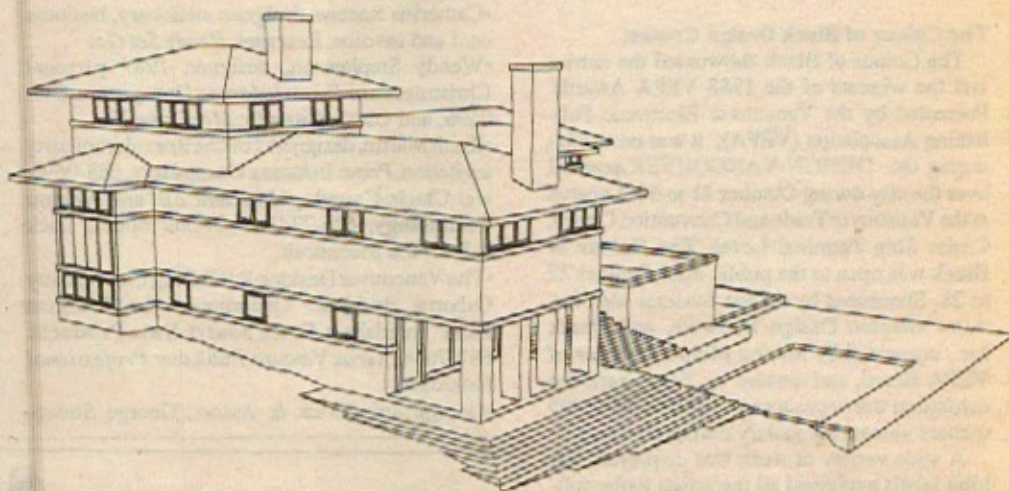
Expand external memory up to 9 MB, add on a board for XT compatibility. There are a variety of hard disk options as well. The Amiga 2000 is the microcomputer that meets your needs, and surpasses your expectations. Until you've seen the Amiga 2000, you haven't really been computing.



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## COMPUTER AIDED DESIGN: MACINTOSH

### New Software Program Helps Take Architects From Concepts To Final Drawings



Copyright 1988; Don Gehron, Architect; William Fox Associates

#### The Architect and The Computer

Principals of many architectural firms are now facing a new decision-making quandary—should they join the computer world. In 1977, Nigel Cross wrote "...the application of the computer as a design aid has been a significant development that has been promising (or threatening) to make a major breakthrough into architectural practice for some time. Such a major breakthrough would go beyond the minority of enthusiast architects who already use computers, to a situation in which computer-aided architectural design is regarded as commonplace." Eleven years later, with the microcomputer quite "commonplace", perhaps we have reached the point of "breakthrough."

At SoftDraw Computing, we started off by writing our own computer-aided drafting and design software routines on an Apple II—it was quite a joy when we could actually draw a part-circle at the edge of the screen without the computer "crashing" (the technical term, for those who care, was writing a bug-free "clipping" routine.) How times have changed in less than a decade—for those of us who struggled valiantly to draw a simple circle (who could pay the hundred thousand dollars or more for a professional CAD system?) to today when many computer-aided design and drafting programs are available at a modest price, which run on relatively inexpensive microcomputers.

#### Mac Architrion—a new concept

Over the last few years SoftDraw has tried many computer-aided design and drafting programs—CADAM on a Mainframe computer, Intergraph on a minicomputer, AutoCad on a personal computer, and many more—but none of them seemed to us to really be a solution for architects. They are powerful and popular, but something was (and still is, in our view) missing.

Seven months ago, we looked at Mac Architrion. Within just hours of trying it, it felt right. Its concept is simple—design in three-dimensions with "blocks", manipulate those blocks (inclining, stretching, duplicating, moving, and so on), instantly view sections, axonometrics, and perspectives until the design is right, then make automatic two-dimensional plans, sections, and elevations for the working drawings. As an added bonus, it even includes a "quantifier" for area and volume calculations. Mac Architrion really is a complete tool that lets the architect develop his or her building from the conceptual stages through final construction drawing production.

#### Mac Architrion modules

The three modules that comprise Mac Architrion are:

- 3D: Design and Development
- 2D: Drafting and Delineation
- Quantifier: Quantity Take-off

These modules and their interactions have been designed to satisfy the two basic requirements of architects and interior designers:

- A) An easy and intuitive method for designing in real volumetric 3D from start to finish;
- B) Complete and instant coordination of all as-

pects of a project: plans, sections, elevations and quantities. In Mac Architrion, these form and originate from a single database.

#### Built In Vagueness

In the 3D module, you can leave as much vagueness in the initial stages to keep artistic interpretation alive and work more intuitively; or place all elements as precisely as you choose. You can create your own library of windows and doors or use pre-designed ones—install one in the 3D module and its elevation, plan, and section appear in appropriate views instantly. A dynamic axonometric view of your work is available at any instant. You can move around your project in real 3D; worm's eye to bird's eye and all around. Moreover, Mac Architrion gives you true hidden line removal in perspective, axonometric and isometric views, with total control over picture-plane, station point and camera lens.

#### 2D Module

The 2D module has all the standard drafting tools and procedures that are available on most good microcomputer CAD programs—single and parallel lines, manual or automatic dimensioning, linear duplication, duplication by rotation and symmetry, precise coordinate entry if desired, standard grid features and grid snap, and so on. As well, it has both vector hatching and bit map patterns—most other CAD programs have only one or the other.

#### Push Some Buttons & Out Come Numbers

The Quantifier module is a numeric data extraction tool that produces tables of data from your design: space by space analysis or overall quantity take-off. You can easily obtain plan areas, volumes, surface areas, and characteristics of 3D elements. These can be saved in formats suitable for analysis and summary using standard spreadsheet programs.

#### Local Use

In just the first few weeks of sales of Mac Architrion in British Columbia, six architectural firms and one interior design firm have begun using Mac Architrion in their practices. Richard Bolus of Arcop Associates Architects and Planners has called it "... the most integrated CAD package for architects that is available at this time." He further comments that "... most CAD products are oriented only towards the production end of the process—Mac Architrion actually proves its value in all phases of the work - from the concept phase and design development, through to contract documentation."

Further information about Mac Architrion is available from Kal Gill at Byte Computers (738-2181) or Paolo Bertola or Dario Trampus at Advantage Computers (685-6227).

**John Lancaster** is president of SoftDraw Computing Inc., a firm specializing in computer consulting for architecture, engineering and construction, and is president of GraphiText Applications Inc., the software developer of ConvertUnits™, a powerful units conversion program.

## CADSCAN Offers Cost Effective Method of Getting Drawings Into CAD Files

### How Do You Get The Drawing In?

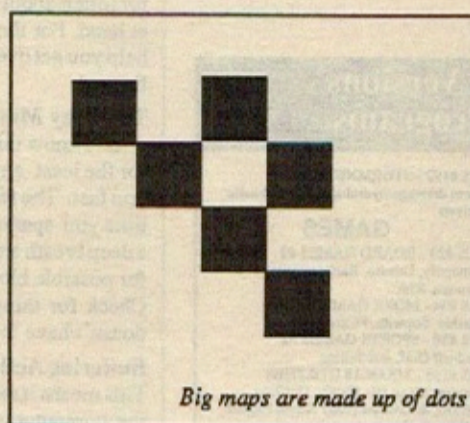
CAD or Computer Aided Design offers many benefits for designers, engineers and architects, but training people in CAD packages is expensive and time consuming. Converting a company to CAD also leaves the problem of what to do with existing drawings. It is very expensive to input old drawings by hand in a CAD program using a puck, or pointing device. Often drawings are left on paper. A Burnaby company, CADSCAN Services Inc., now offers a relatively inexpensive way to have existing drawings input and rendered into CAD drawings.

### Big Scanner

They scan maps or drawings using a huge scanner which will scan up to "E" width drawings. The drawing at this stage is a bit map file which takes up an enormous amount of space. For example an average size road map might take up 4-

*"..training people in CAD packages is expensive and time consuming.."*

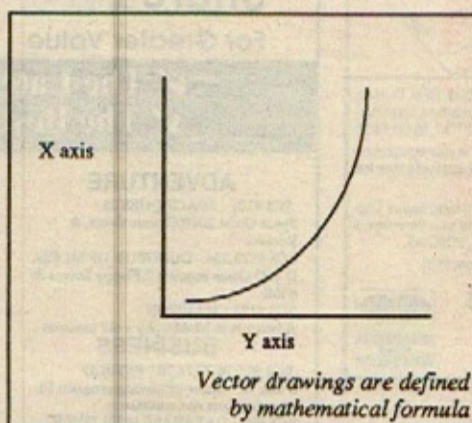
8 megabytes of storage. This is obviously not practical to work with, in addition, the resolution is limited to that of the scanner at about 400 dots per inch (dpi). At this resolution reprinting the document would still have a jaggy look to it. The next step is to run the file through a dedicated recognition CPU with a large random access memory



capacity. This box has a recognition module which can recreate the lines of the bit map file into a vector based file.

### What's A Bit-Map?

A bit map is a file which maps the display screen or printer output as a series of black dots. We are all familiar by now with the jagged look of letters which come from most dot matrix printers. This type of output is a bit map file at its worst. Vector drawings or object oriented drawings on the other hand are not limited to the resolution of a particular printer. That is, the better the printer, the better the output. If you print on a dot matrix printer, it will still be jagged, because that is all the printer can do. If however, you print on a laser printer, or with a plotter, the lines can be very fine. But first it must be translated from a series of black dots to a mathematical formula which defines the line, hence the name vector or object-oriented drawings.



### Multi-Layered Drawings

CADSCAN's smart box can place different entities on different layers of the drawing, and can even recognize text and translate that portion of the drawing into ASCII files. The recognition process is quite good, and occurs quickly, however there are always rough edges which require a human touch to finalize the drawings. According to CADSCAN's marketing manager, Jeff Marceil, it takes up to six months to get an operator proficient at using the scanning software.

### The Options

The conversion from existing drawings to CAD can be done by manual means with a CAD package and a skilled CAD person, but it takes much more time. CADSCAN claims that they can charge out their services at roughly the same rate as this traditional method, but produce results in considerably shorter time spans. For example,

one large company has about 3,000 active drawings which could take up to seven years to input manually. Using CADSCAN, Marceil claims they could do it in three months. This savings can often mean the difference between getting a contract or not for many smaller firms. Having the resource of CADSCAN means that they can compete with much larger firms. According to Marceil, CADSCAN has assembled over \$350,000 worth of equipment and made it accessible to their clientele.

### How Much?

Prices for scanning only start at \$10 for an "A" size drawing and range up to \$35 for an "E" size drawing. Conversion of drawings using the recognition module costs \$96/hour for drawings and \$192/hour for a map. The fine tuning or restoration costs \$40/hour. A typical architectural floor plan in a "D" sized drawing might cost \$25 to scan, \$24 for the recognition, \$120 for restoration for a total cost to convert to CAD of \$169. The company has a considerable discount for larger volume customers ranging up to 25% off for 5,000 drawings or more.

For the architect or designer, using CADSCAN in the conversion of drawing to CAD, gives them a head start on the tedious drafting and revision of drawings.

CADSCAN can be reached at Discovery Parks 100-3700 Gilmore Way, Burnaby, V5G 4M1 (604) 438-7226

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### Data Train <sup>10</sup> ♠

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## COMPUTER AIDED DESIGN

### AutoCAD Tips

This section is for the AutoCAD user, novice or expert. Some of these ideas may be familiar to some of the experienced operators, but everyone can use a little refresher. Who knows, you may have forgotten about some of the little tricks or just got tied up in the job at hand. For the users that are not so experienced these tips might help you get over the hump and make you a better producer than you figured.

**The Lazy Man's Way 1)** The best operators around are the lazy ones. I know this sounds crazy, but a lazy person is always looking for the least amount of work to get a job done. This is what makes you fast. The fewer keystrokes and mouse moves you make the less time you spend on a drawing. Before you start a new drawing take a deep breath and figure out what its going to take to do this job. Look for possible blocks or blocks that can be edited to fit the situation. Check for things that can be copied or mirrored. Anything that doesn't have to be redrawn saves time.

**Buffering Action 2)** AutoCAD has a 16 character keyboard buffer. This means it remembers sixteen letters or numbers you key in while the computer is working on the last thing you did. This allows you to keep a couple of steps ahead of the game. The buffer comes in handy at any stage of the proceedings. One place this really shines is on load-up of an old drawing. A typical use in this case might go down like this:

You turn on the machine and load AutoCAD.  
On the screen comes the main menu.  
You type the following: 2 (RETURN)  
Drawing Name: D2534-47 (RETURN)  
ZOOM (RETURN), E (RETURN), (RETURN), .85X (RETURN)

Now you can take a break and stretch. When you come back your drawing is loaded, almost filling the screen. You don't have to wait for the drawing to show on the screen to start entering commands.

**Avoid Regens 3)** Having your drawing on the screen with a little space around the edges allows you to pick your first window zoom and from here on in you can use zoom dynamic for most of your moving around the screen, thus reducing time consuming regens.

**Lower Viewres 4)** The big thing these days seem to be those nasty little regens. One way to speed up the process is to lower the viewres. There's a new one for most of you. The viewres is just AutoCAD's command for setting the resolution of your screen. AutoCAD's default is 32K x 32K, a bit more than you have. The default setting is 100. You can lower this setting to as low as you want it. The only drawback to low viewres is the circles and arcs tend to get more and more jagged. If you don't mind this you can speed up the regens by maybe 25%. To set viewres:

Type: VIEWRES (RETURN)  
It prompts: DO YOU WANT FAST ZOOMS?(Y/N)  
Type: Y (RETURN)  
It prompts: ENTER CIRCLE ZOOM PERCENT  
(1-20000)<100> Type: 25 (RETURN)

Twenty-five is a good safe number. The circle don't look too bad and the regen is speeded up quite a bit. The bad thing about short regens is you don't have time to grab another coffee.

**Predictable Prompts 5)** Get to know what AutoCAD is going to ask you. Knowing the possible prompts in any given situation is like being able to read a wife/ husband/ boyfriend/ girlfriend's wants before he or she asks. That makes them happy and that makes you happy!

**Pre-Type Commands 6)** Remember what I said about the keyboard buffer? This can prove helpful during a drawing as well. When you are using a tablet or screen menu for picking commands, you must wait for the command to be executed before you can pick another. If you are using the keyboard you can type the next command while the last one is working. This helps you to learn the prompts and the program as well as speeding up the drawing process.

**Undo Mistakes 7)** Don't worry about making mistakes during a drawing. AutoCAD is so forgiving with oops, control C, and Undo. To be fast you should always be on the verge of making mistakes. This makes you push AutoCAD and yourself to the limits.

**Save Regularly 8)** Save your drawings regularly, and I don't mean every couple of days. Save the drawings to the hard disk at least every half hour. You never know when your going to be sitting in a dark room in front of a blank screen. It is also a good idea to keep a floppy in the port and save your drawing to the floppy every couple of hours. Hard drives have a strange habit of eating drawings occasionally. If you have it on a floppy, the most work you would have is two hours getting to the point you were at when your "C" drive decided it was lunch time.

**Know Thy DOS 9)** Get to know DOS better. DOS may not seem to be too terribly exciting or useful but it controls your whole computer system. If you get into trouble and you don't know how to use all the fancy utility programs out there. DOS can probably get you out of the hole.

**Don't Worry, Be Happy 10)** The best tip for the efficient use of AutoCAD is to be able to sit back, relax and have fun with it. You aren't just a draftsman any more. You are now a brain, with the expanded capabilities of the wonderful device we call the computer. Remember, don't just use AutoCAD, make use of AutoCAD!

by Kelly Hein Graph-Tec 1-856-6362

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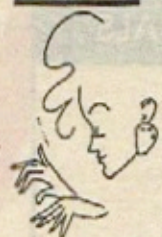
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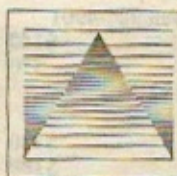


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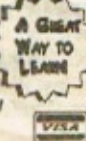
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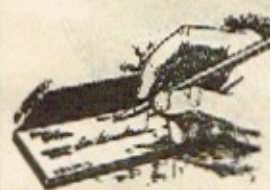
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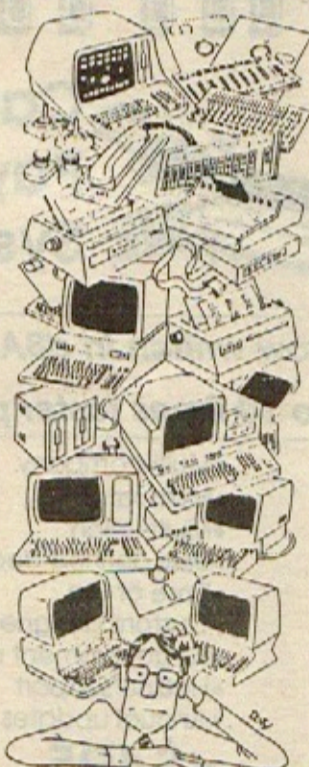
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 Apples BC Computer Society Lorne 467-6062.  
 Apple II User Group Meeting BC Apple Society, Burnaby  
 Rugby Club, regular meeting Kiyo Masuda 437-9935  
 Apple III SIG Monthly Kiyo Masuda 437-9935  
 Astute - Atari St. 1st Tues. of month 7:30 Hastings Comm.  
 Centre. Membership \$15. Dave Whalley 942-8301.  
 Beaver Valley Commodore Club Meets first Tues every month  
 at Montrose School Library. Call John Vink 367-6426  
 Behnson Graphic Supp. Ltd., 1016 Richards St., Van. 681-  
 7351. Presentations on the Mac, Dec. 3, Airbrush Techniques,  
 Dec. 10, 1988.  
 B.C. Unix User's Group meets 4 times a year. Call George  
 Pajari 925-2555, 2545 Queens Ave, West Van V7V 2Y9.  
 Clipper Developers Association 1st Mon SFU 873-0747  
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 Forth Interest Group Speakers and Tutorials on Forth hard.,  
 soft. & applic. Meets 7:30 1st Thurs, BCIT main bldg, 3700  
 Willingdon Rm. 1A-324  
 ICCA, Ste. 400, 1190 Melville St. Van., B.C. 682-2747. Next  
 meeting Tuesday, Nov. 29, 1988, Sheraton Landmark Hotel,  
 Robson Street, Cocktails: 5:30; Dinner: 6:30; Speakers: 7:30.  
 Contact ICCA 682-2747.  
 Kaypro User Group Vancouver Portable Computer Club 3rd  
 Monday at Kaypro (CP/M) 278-5776  
 Mac User Group Meeting BC Apple Society, WCB Building,  
 6951 Westminster Hwy (Kiyo Masuda) 437-9935. Dec. 14 Gen.  
 Meeting; Dec. 21 Executive Meeting. Dec. 22 Newsletter  
 deadline.  
 Mainland Mac Rm 115 Kwantlen College, Surrey, 574-3813,  
 Ron Haidenger. Call for info  
 Maple Ridge Computer User Group 467-2647 M.R.  
 Sr. Secondary School 7:30 PM,  
 New Apple Alliance, May Chow 224-9199. Free  
 NEC APC Users Group Bi-monthly Lee 980-5825  
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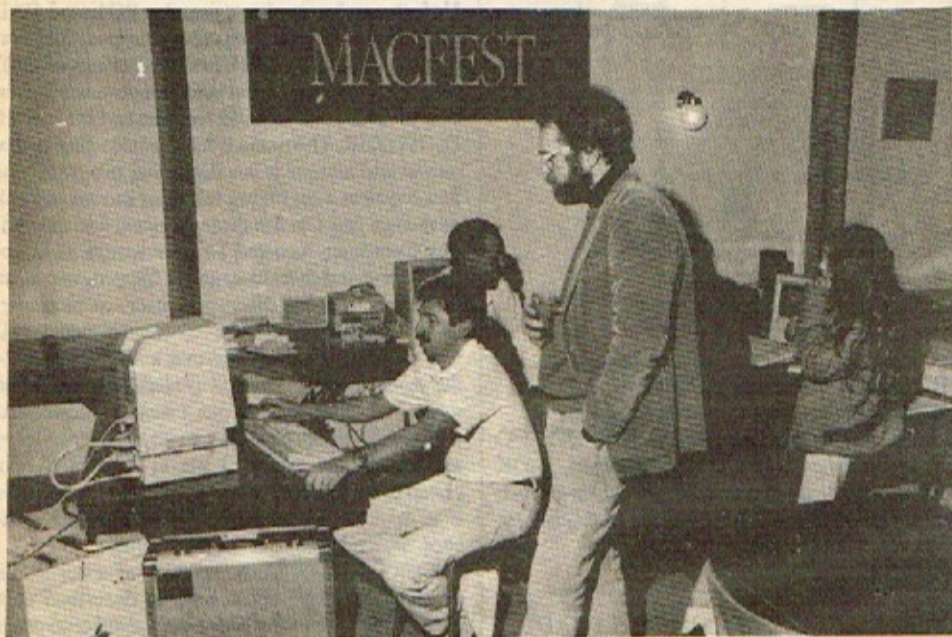
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# Teachers Gather For HyperCard Camp



Sunshine Coast, Nov. 10th to 13th

A quiet evening on the Sunshine Coast begins a weekend of learning for thirty-eight B.C. teachers and their Macs at the RockWood Lodge workshop facility in Sechelt. Sponsored by Apple Canada the Camp was staffed by Education Consultants Barry Underwood and Al McTavish and Systems Engineer Teri Langton. In addition Folkstone Design provided consulting and training for the participants from early morning to late into the evening. The Rockwood facility provides a large central skylight room surrounded by sleeping rooms. As a result, we heard that people were working to as early as three in the morning before falling into bed.

The early morning was reported as interesting when someone exploring the use of external speakers on a Macintosh found a variety of novel startup sounds for the Mac. Everyone worked together in a large skylight common room and at one end we created an informal classroom complete with rattan chairs and a kodak overhead projector for the Macintosh.

Short classes were presented as required to provide a solid technical base of common knowledge for all the participants. The topics included Macintosh Basics, Using HyperCard, HyperCard Objects, Object Oriented Programming Concepts, HyperCard Scripting Basics, Advanced HyperCard Scripting, External Commands, Using Sound, Sound Editing and Capture, Animation Techniques, Resource Editor, Graphics Capture, and more. The evenings profiled participants projects which included several sophisticated school management systems. Other participants projects included resource center management, textbook tracking, CAI for fractions and the behavior of primates (a multimedia project).

Many participants explored ways for students to learn by helping them create their own HyperCard material. There was excitement about the

enabling feel that this technology provides. These projects included a community profile at Galino Elementary, a high school year book project, and a Hypercard project which will enable blind students to use the Macintosh. The progress that each of the participants made on their project over the weekend was impressive. Non-technical people with little or no previous HyperCard experience left the camp with animations of dinosaurs, a visually strong tutorial on Japan, and tools that enable students to easily import existing text into stacks of their own. Graphics of animals abounded while others organized and made available existing Hypercard material sorted for curriculum requirements. The interaction between the participants was very rich because they were talking about the subjects they were dealing with more than the technology they were using. HyperCard has shifted the balance so that attention can remain on the subject of study rather than implementation technology.

The runners left Saturday afternoon for the Khatilano road race on Sunday, and many others left Saturday evening talking about organizing workshops in other parts of the province. Solid projects are underway and coordination and communication were becoming important issues. The last people left RockWood lodge Sunday morning, fortified with hot butter croissants created by the cater Caf Pierrot in the RockWood ovens, talking, thinking and planning. As I accompanied the last five participants with their load of Macs to the seaplane dock it seemed appropriate that the Macs should fly. Imagination, creativity and communication provided the focus for this successful gathering and will fuel the learning potential of this technology as the participants and others introduce this media to our children.

by Scott Bleackley, Folkstone Design Inc.

## NEWSBYTES: EDUCATION

### EDUCATION

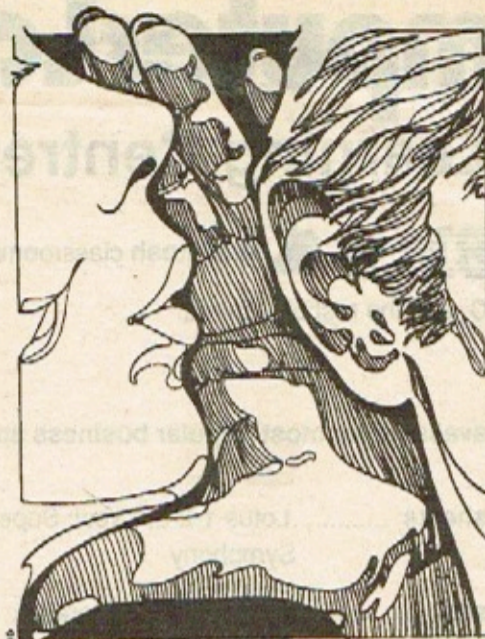
#### Ministry Signs Contract For Career Software

TORONTO (NB) — The Ontario Ministry of Education has signed a two-year contract to distribute Choices Jr. software in the province's senior elementary and secondary schools. The contract with Canada Systems Group Ltd. is worth C\$456,000. Choices Jr. is a microcomputer-based system designed to introduce students aged 10 to 15 to career planning. CSG, now in the process of being merged into STM Systems Corp. of Mark-

ham, Ontario, distributes the software worldwide. Choices Jr. is used in schools across Canada, in more than 30 U.S. states and in several countries in Europe. CONTACT: CANADA SYSTEMS GROUP LTD., 393 University Ave., Toronto, Ont. M5G 2H9, (416) 979-3900

The Educational Testing Service, New York, will include computer simulations of classroom teaching situations in a new teacher licensing exam. The exam is designed to help states eliminate incompetent teachers. The exam is aimed at beginning teachers, not veteran educators.

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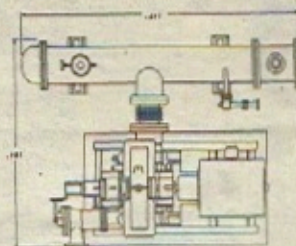
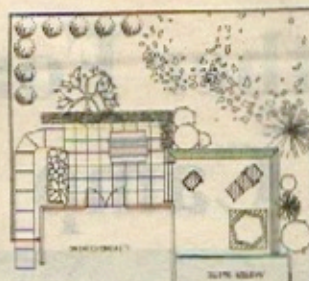
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## SOFTWARE REVIEW



**PRODUCT:** Generic CADD Level 3  
**PUBLISHER:** Generic Software, Inc.  
**SYSTEM REQUIREMENTS:** IBM PC, PC AT, and compatibles. 512K required, 640K and a math co-processor recommended. Supports a mouse and a variety of digitizers. EMS also supported.  
**PRICE:** U.S. \$199

Generic Software, Inc. sells Generic CADD, a low-cost computer-aided design program for PCs and compatibles. Unlike most such programs, Generic CADD is sold in modules, enabling users to purchase the features as they are required. Generic CADD is competitive on many features with AutoCAD, yet it is much less expensive. Level I, the basic program teaches the rudiments of computer-aided design and allows you draw basic images in two dimensions. The enhancement programs include auto dimensioning, drafting enhancements, programs to allow you to convert to and from other CADD formats as well as desktop publishing packages using PostScript. Symbol libraries are also available for a variety of requirements including home design, plumbing and electronics.

The drawing screen has similarities to that of AutoCAD and has customizable menus. Menus can be removed from the screen to use the entire area for drawing. Similar to Generic Software, Inc.'s First CADD, this program lets you draw objects in freehand, and then manipulate them with a set of commands. These include break, change, erase, change pattern, and change color. Generic CADD has added the commands Explode, Image, and List. Explode lets you specify elements of a drawing as objects, and then break the drawing into its individual components. The Image command lets you move one of those parts to another drawing, and the List command shows the names of the available objects. Generic CADD lets you create drawings with up to 256 layers, and has a special Align command to synchronize drawings with digitizers. The program also has facilities for automating operations using batch files. The program can not transmit files easily to a mainframe, or use AutoCAD files directly.

### Speed Improvements

Level 3 is about 20-percent faster than the earlier version with more user control and more precise screen displays.

### The Manual

The new manual is excellent, including a thorough index, tutorial, and examples. The manual is slick and easy to use.

### Hatch and Fill

The hatch/fill capability unique to this system, and has 16 hatch patterns, the ability to fill with any color, and a way to generate customized hatch patterns via text editors or word processors. There are 256 line types and a views feature to name the present view so users can return to it later with the zoom command.

### Conclusion

This program is inexpensive, powerful, and full-featured. When all is said and done, Generic CADD is very impressive, given its extremely low price.

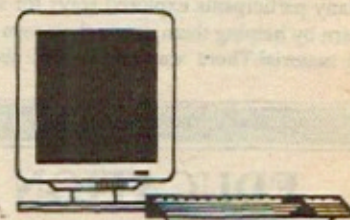
## SHAREWARE REVIEW

**PRODUCT:** Curve Digitizer  
**PUBLISHER:** West Coast Consultants, San Diego, California, available through Shareware.  
**PRICE:** The registered version is \$89 US, try out through SHAREWARE for under \$20.00.

Computer-Assisted Drafting (CAD) is becoming increasingly popular with many PC owners. Unfortunately, owning a popular PC based CAD program can be a very expensive proposition. Fortunately, SHAREWARE has its offerings of CAD programs for the casual and not-so-casual user. The program that I would recommend is CURVE DIGITIZER. The name is a tad misleading in that one would assume it is a digitizing program (one that requires a digitizing tablet or mouse to run). Although you can use these devices, and the serious Computer-Assisted Drafter would, it is not necessary, and therefore makes the program even more practical for the casual user, or beginner. CURVE DIGITIZER is a 2D (two dimensional) Cad package. I understand that a 3D version is in the works and will soon be available to registered users. For those starting out, I would recommend a 2D package because it is much simpler to learn and understand. CURVE DIGITIZER is NOT a cheap program, only an inexpensive one, because it is marketed through the SHAREWARE concept, which leaves out the middleman.

CURVE DIGITIZER has 333 layers or levels available. A layer could best be described as a clear piece of drawing paper overlaid onto other sheets. Normally, only one layer can be written on at a time, that being the ACTIVE layer (or the top sheet of paper). Imagine a drawing for a house. On one piece of paper (layer) you lay out the walls of the room. On another you lay out the bedrooms reversed. On another you place windows and doors. On another piece of paper you show an alternative placement for the windows. On another you show plumbing, or heating, or electrical requirements. With each of these options being drawn on separate pieces of paper (or CAD layers), you have the choice of looking at any combination of information without the clutter of the unwanted sheets. You change quickly change your mind and look at the second option by removing some sheets, and inserting others. Text should be placed on separate layers so you can analyze the drawing uncluttered. This is one major advantage of CAD programs. You may be surprised at how fast you use up the available layers.

CURVE DIGITIZER has six menus available through the function keys. These menus are for line or arc creation, symbol libraries, editing, file saving/plotting, hatching/text and so on. Function key access to these menus makes drawing with CURVE DIGITIZER so much simpler than many other CAD programs. Features of this program are box, circle, and arc creation, zoom, scale, mirror, auto-dimensions, copy, rotate, area calculation, smooth curve and much more. Extra disks are available for other fonts and electronic and architectural symbols. CURVE DIGITIZER supports most dot-matrix printers, plotters, digitizing pads and mice. A co-processor is not required. CURVE DIGITIZER is written by West Coast Consultants, San Diego, California. The registered version is \$89 US, but you can try out the program through SHAREWARE for under \$20.00.



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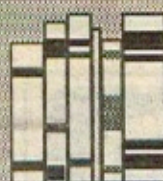
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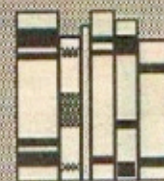
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